KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

Value added Course

on

“Ethical Hacking”

Organized by

1. K.Sravana Kumari
2. V. Ramesh

DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS

Academic Year 2021-22

KAKATIYA GOVERNMENT COLLEGE, HANUMAKONDA

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

KAKATIYA GOVT. COLLEGE
College Code: 006
Hanamkonda, Warangal.

CIRCULAR

Date: 20-04-2022

Department of Computer Science & Applications is conductiong a Value Added Course on *"Ethical Hacking"* from **25-04-2022** to **31-05-2022** (***30Days***) for B.Com CA III Year Students. All the Final Year students of B.Com CA are informed to enrol their names and take an active participation to make this activity successful.

Incharge
Dept. of Computer Science
Kakatiya Government College
Hanamkonda, Warangal.

PRINCIPAL
KAKATIYA GOVT. COLLEGE
Hanamkonda.

1. Introduction

Value-Added courses are part of the curriculum designed to provide necessary skills to increase the employability quotient and equipping the students with essential skills to succeed in life.

Department of Computer Science and Applications, **Kakatiya Government College, Hanumakonda** offers a wide variety of Value Added Courses which shall be conducted zero class hours. These courses shall be conducted by our staff and help students stand apart from the rest in the job market by adding further value to their resume. These value added courses will be mostly independent to each type of the fields.

For this Academic Year 2021-22 , Department of Computer Science and Applications has introduced value added course "Ethical Hacking" to B.Com (Computer Application) students to fulfill the knowledge gap on Network Security because of most of business Applications are running on cloud platform.

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2. Objectives

Objectives of the Value Added Course are:

- To provide students an understanding of the expectations of industry.
- To improve employability skills of students.
- To bridge the skill gaps and make students industry ready.
- To provide an opportunity to students develop their inter-disciplinary skills.
- To mould students as job providers rather than job seekers.

3. Designing the Courses

- Before designing the syllabus, we collected feedback from the employers and industry people that willbe analyzed and considered to select and design an appropriate course by identifying the gaps.
- Apart from this discussions may also be held with our college employers and industrial experts to understand the expectations for current and emerging trends.
- This Value Added Course developed by a Department and placed before the Academic Council of the College.
- We allotted unique course code to each course.

4. Guidelines for Students .

- Value Added Course is not mandatory to qualify for any program.
- It is a teacher assisted learning course open to all students without any additional fee.
- Classes for VAC will be conducted on zero class hours .
- A student will be permitted to register only one Value Added Course in a Semester.

5. Duration and Venue

The duration of this course is 30 hours.

The respective Faculty organized this Course in our department Computer Lab-4 .

6. Attendance

The respective faculty has maintained Attendance and AssessmentRecord for candidates who have registered for the course.

- The Record is contained details of the students' attendance, marks obtained in the Internal Assessment Tests.
- Assignments are conducted.
- We allowed the student who have a minimum of 75% attendance in the courses.
- Provided relaxation of attendance up to 10% to the students who participated in extracurricular activities and participation in NCC.

7. Examination and Grading

- we assessed the students by conducting two internals and one End term examination .
- The pattern of Internal Examination is Multiple choice based Questionnaire and that End examination included descriptive and practical.
- A candidate who has not secured a minimum of 40% of marks in a course (internal and end-term) shall reappear for the course in the next semester/year.

8. Course Completion

- Learners will get a certificate after they have registered for, written the exam and successfully passed.
- The students who have successfully completed the Value Added Course shall be issued with a Certificate duly signed by the Authorized signatories.

Syllabus:

In this first module, you will learn the basics of ethical hacking

1. Information Security Overview

1.1 Internet is Integral Part of Business and Personal Life – What Happens Online in 60 Seconds

1.2 Essential Terminology

1.3 Elements of Information Security

1.4 The Security, Functionality, and Usability Triangle

2. Information Security Threats and Attack Vectors

2.1 Motives, Goals, and Objectives of Information Security Attacks

2.2 Top Information Security Attack Vectors

2.3 Information Security Threat Categories

2.4 Types of Attacks on a System

2.5 Information Warfare

3. Hacking Concepts

3.1 What is Hacking?

3.2 Who is a Hacker?

3.3 Hacker Classes

3.4 Hacking Phases

4. Ethical Hacking Concepts

4.1 What is Ethical Hacking?

4.2 Why Ethical Hacking is Necessary

4.3 Scope and Limitations of Ethical Hacking

4.4 Skills of an Ethical Hacker

5. Information Security Controls

Ethical Hacking Value Added Course

25-04-2022 to 31-05-2022

Registered Students:

S.No	Registered Student Name	Hall Ticket Number	Email Address	Signatures
1	MARIYAMMAA	6192516	bsaikrishna2011@gmail.com	
2	A.Santhosh Kumar	6202001	santhoshkumar42855@gmail.com	
3	Abhishek mishra	6202002	abhimishra5022@gmail.com	
4	Adapelliakhil	6202003	adapelliakhil@gmail.com	mishra
5	Akkati Harinath	6202007	harireddyakkati.91@gmail.com	Harinath
6	Akkinaveni prashanth	6202008	prashanthakkinaveni143@gmail.com	Prashanth
7	Amgothu Srinivas	6202012	srinivasamgothu143@gmail.com	Srinivas
8	Anishetti Ruchitha	6202014	ruchithaanishetti@gmail.com	Ruchitha
9	Ankeshwarapu Navani	6202015	navanai2000@gmail.com	Navani
10	Anumasa Anusha	6202017	anumasaanusha3@gmail.com	Anusha.
11	ARELLI SRAVANI	6202019	sravaniarelli2206@gmail.com	Sravani
12	Arepally vamshi Krishna	6202020	arepally.vamshi89@gmail.com	vamshi
13	Arsham. Jyothsna	6202021	jyothsnaarsham8@gmail.com	Jyothsna
14	Ashadapu Naveen	6202022	ashadapunaveen123@gmail.com	Naveen
15	Ashadapu Praveen	6202023	praveenashadapu1@gmail.com	
16	ATTEM MADHUSUDAN	6202024	madhusudanattem@gmail.com	madhusudan.
17	Avunuri sambaraju	6202026	avunurisambaraju344@gmail.com	Sambaraju
18	Ayyori Deeksha	6202027	ayyorideeksha1231@gmail.com	Deeksha
19	Badavath Anil Kumar	6202029	badavathanilkumar71421@gmail.com	Anil
20	Badavath Srinu	6202031	badavathsrinu03@gmail.com	Srinu
21	Baikani prashanth	6202033	baikaniprashanth71@gmail.com	Prashanth
22	bairavenivamshi	6202034	bairavenivamshi12@gmail.com	
23	Bairaveni vamshi	6202034	bairavenivamshi12@gmail.com	Vamshi
24	Balasani abhinay	6202035	abhinaybalasani0511@gmail.com	
25	Ballikura maneesha	6202036	mmaneeshachitti@gmail.com	Maneesha
26	Bandela Hemanth Shiva Sai	6202040	shivahemanth802@gmail.com	shiva.Si
27	Bandi sriram	6202042	srirambandi9145@gmail.com	Sriram
28	Banoth Hathiram	6202043	banothhathiram04@gmail.com	

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29	Banoth Naveen	6202044	naveensra225@gmail.com	
30	Barigela srinath	6202051	srinath77492@gmail.com	Srinath
31	Bashaveni Pavan Kalyan	6202052	rowdybangaram11@gmail.com	
32	Bavu shivaprasad	6202053	shivaprasad38317@gmail.com	shivaprasad
33	Bembeeru Arun	6202054	arunkrishna2540@gmail.com	Arun
34	Bhukya Santhosh	6202056	bsanthosh7993809178@gmail.com	Arun
35	BHUKYA SURESH	6202057	sureshbhukya349@gmail.com	Suresh.
36	Bhuma saiteja	6202058	saivivek5557@gmail.com	Saiteja
37	Bijili sandhya	6202059	bijilisandhya3@gmail.com	Sandhya
38	Boda Narender	6202061	bodanarendar62@gmail.com	Narender.
39	Boda swarna	6202062	swaranaboda4563@gmail.com	
40	BODDU SATHWIK KUMAR	6202063	sathwikkumarboddu@gmail.com	
41	Bogam Kartheek	6202064	karthikbogam907@gmail.com	Karteek
42	Bolumalla Anil	6202072	anilbolumalla8374@gmail.com	Anil
43	Bommakanti Uday kiran	6202074	buday4232@gmail.com	Uday kiran
44	Mahesh bonala	6202075	maheshbonala2195@gmail.com	Mahesh
45	Boorla Nishanth	6202077	naninishanth68@gmail.com	
46	BOSU AJAY KUMAR	6202078	bosuajay6@gmail.com	Raghavaraj
47	Bulle Ajay	6202081	ajaymunna331@gmail.com	Ajay
48	Ch.Pravalika	6202083	charagondlapravalika@gmail.com	Pravalika
49	Cheepathi prem	6202084	cheepathiprem@gmail.com	
50	CHENNURI RAJU	6202087	rajkumar.chennuri123@gmail.com	
51	CHENNURI RAJU	6202087	rajkumar.chennuri123@gmail.com	
52	cheruku Vijaykumar	6202088	Vijaykumarch407@gmail.com	
53	chikkudu.dileep	6202089	dileepchikkudu@gmail.com	
54	chilagani srikar	6202090	srikarchilagani7989@gmail.com	Srikar
55	Chinthala Ranjith	6202092	ranjithrock8485@gmail.com	Ranjith
56	ChippaSaikoushik	6202094	saikoushikchippa@gmail.com	
57	Damera Divya	6202096	dd6495453@gmail.com	Divya
58	DANDIKOLA DINESH	6202099	dineshdandikola@gmail.com	
59	Datla Laxman	6202100	datlalaxman@gmail.com	

60	Datla Ramu	6202101	ramudatla22@gmail.com	D. Ramu
61	Dayyala Ganesh	6202102	gana42711827@gmail.com	Ganesh
62	Deshini sandeep	6202105	sandeepdeshini9@gmail.com	
63	Dhadigela Rakesh	6202108	fablousrakesh@gmail.com	Rakesh
64	Ellendula sai kiran	6202124	ellendulasaikiran484@gmail.com	Saikiran
65	Jimada sandeep	6202175	sandeepjimada@gmail.com	
66	Kaviri Raveena	6202196	kaviriraveena@gmail.com	KRavee
67	Kunde Karthik	6202219	karthikkundekk@gmail.com	Karthik
68	Pasula Vikas	6202307	vv5842213@gmail.com	vikas
69	Singarapu Akshay	6202346	Akshayrebel@5g.mailcom	Akshay
70	Singarapu Akshay	6202348	Akshayrebel@5g.mailcom	SAkshay
71	Akhil velpugonda	6202382	akhilvelpugonda22888@gmail.com	
72	Dandiga Devender	6202098	dandigadevender9963@gmail.com	Devender

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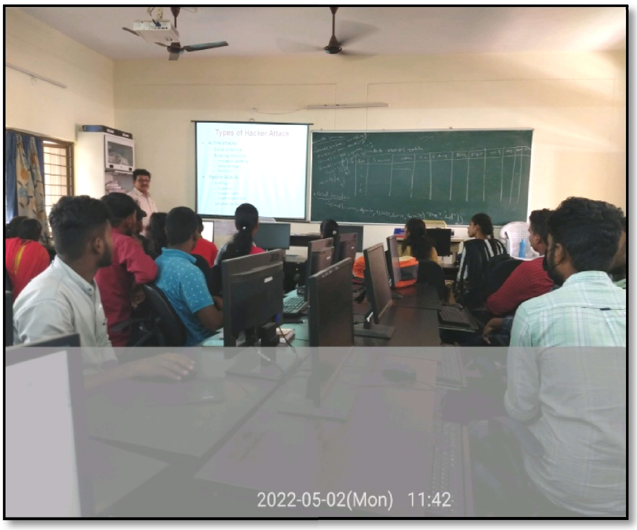
Ethical Hacking Value Added Course

PHOTOS



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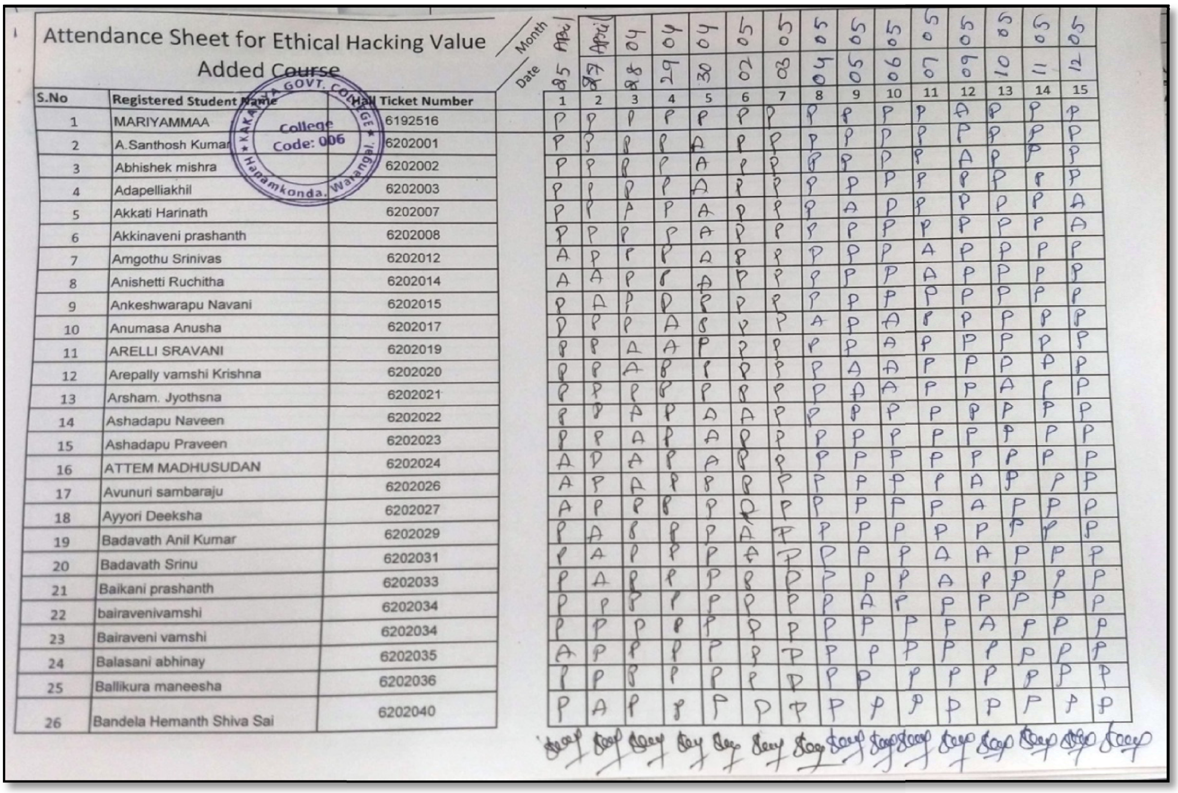
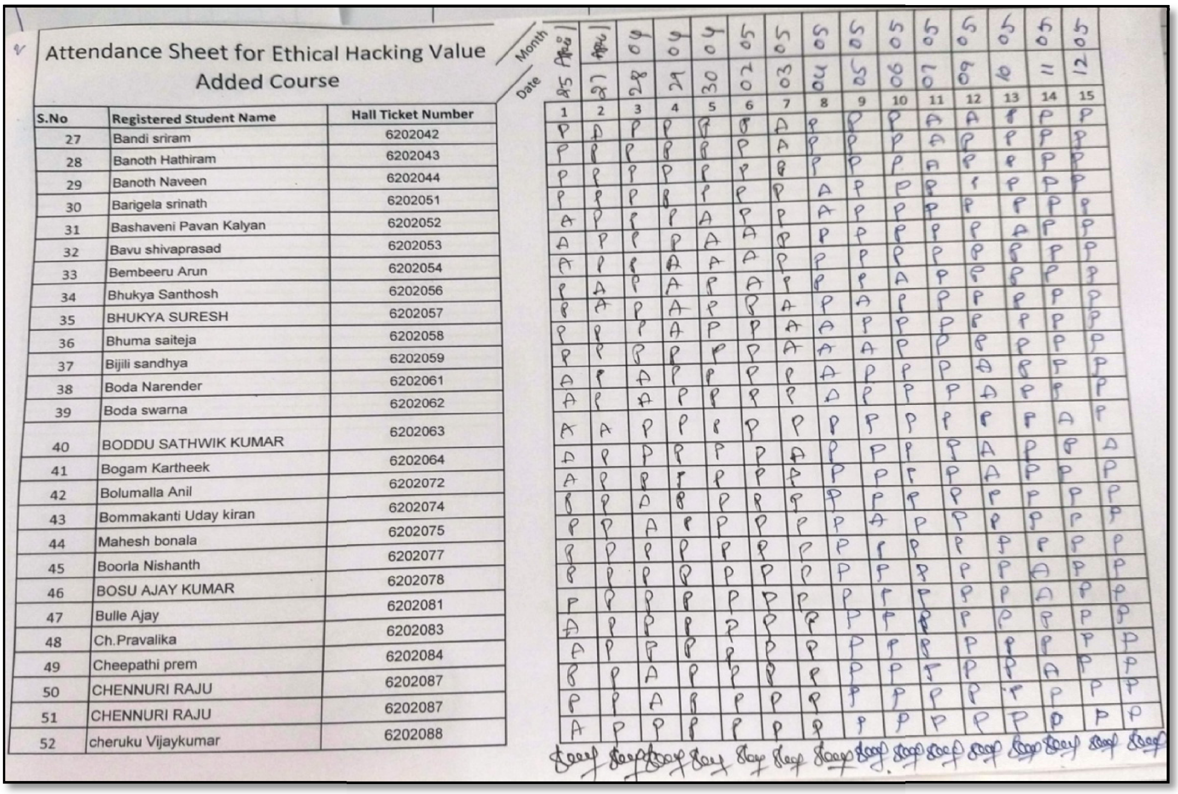


Attendance Sheet for Ethical Hacking Value Added Course

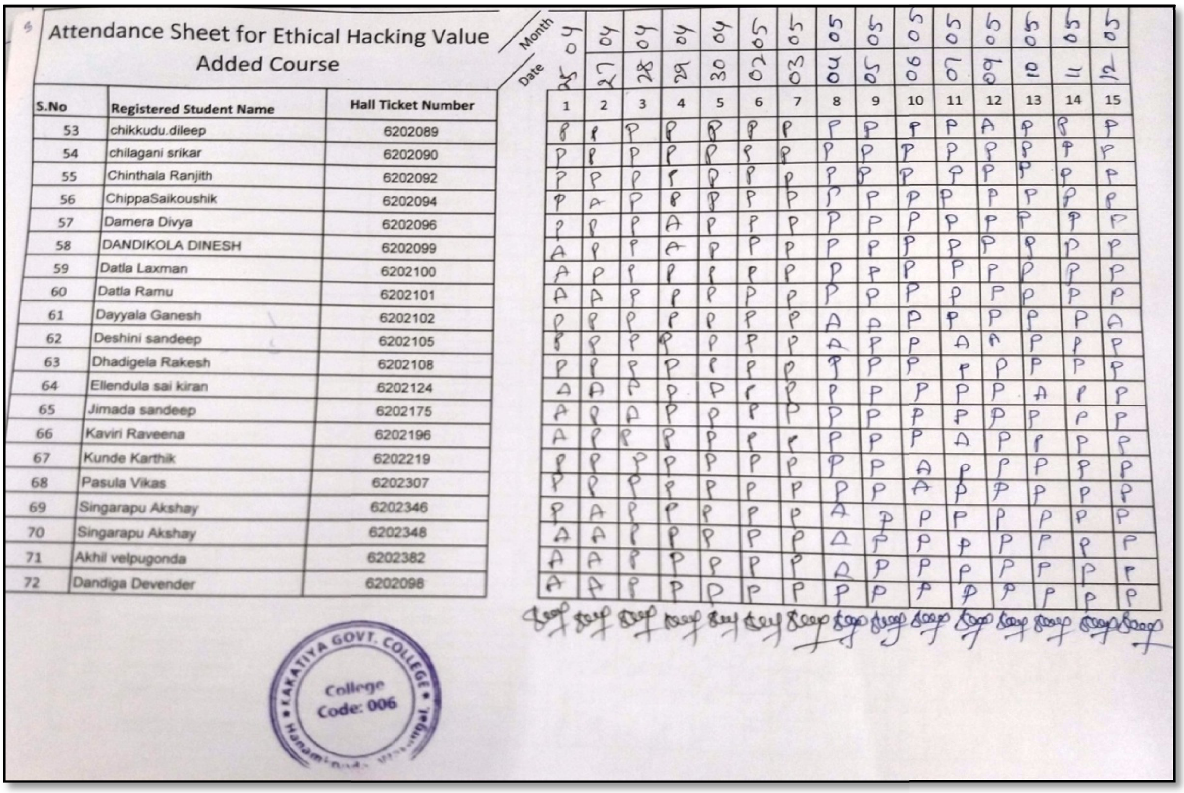
KAKATIYA GOVT. COLLEGE * Hanamkonda, Warangal. College Code: 006

		Month	April	April	04	04	04	05	05	05	05	05	05	05	05	05	05
		Date	25	27	28	29	30	02	03	04	05	06	07	09	10	11	12
S.No	Registered Student Name	Hall Ticket Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	MARIYAMMAA	6192516	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
2	A.Santhosh Kumar	6202001	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
3	Abhishek mishra	6202002	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P
4	Adapelliakhil	6202003	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
5	Akkati Harinath	6202007	P	P	A	P	A	P	P	P	A	P	P	P	P	P	A
6	Akkinaveni prashanth	6202008	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A
7	Amgothu Srinivas	6202012	A	P	P	P	A	P	P	P	P	P	A	P	P	P	P
8	Anishetti Ruchitha	6202014	A	A	P	P	A	P	P	P	P	P	A	P	P	P	P
9	Ankeshwarapu Navani	6202015	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Anumasa Anusha	6202017	P	P	P	A	P	P	P	A	P	A	P	P	P	P	P
11	ARELLI SRAVANI	6202019	P	P	A	A	P	P	P	P	P	A	P	P	P	P	P
12	Arepally vamshi Krishna	6202020	P	P	A	P	P	P	P	P	A	A	P	P	P	P	P
13	Arsham. Jyothsna	6202021	P	P	P	P	P	P	P	P	A	A	P	P	A	P	P
14	Ashadapu Naveen	6202022	P	P	A	P	A	A	P	P	P	P	P	P	P	P	P
15	Ashadapu Praveen	6202023	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P
16	ATTEM MADHUSUDAN	6202024	A	P	A	P	A	P	P	P	P	P	P	P	P	P	P
17	Avunuri sambaraju	6202026	A	P	A	P	P	P	P	P	P	P	P	A	P	P	P
18	Ayyori Deeksha	6202027	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P
19	Badavath Anil Kumar	6202029	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P
20	Badavath Srinu	6202031	P	A	P	P	P	A	P	P	P	P	A	A	P	P	P
21	Baikani prashanth	6202033	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P
22	bairavenivamshi	6202034	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
23	Bairaveni vamshi	6202034	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
24	Balasani abhinay	6202035	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	Ballikura maneesha	6202036	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	Bandela Hemanth Shiva Sai	6202040	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P



Attendance Sheet for Ethical Hacking Value Added Course

		Month	April	April	04	04	04	05	05	05	05	05	05	05	05	05	05
		Date	25	27	28	29	30	02	03	04	05	06	07	09	10	11	12
S.No	Registered Student Name	Hall Ticket Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
27	Bandi sriram	6202042	P	A	P	P	P	P	A	P	P	P	A	A	P	P	P
28	Banoth Hathiram	6202043	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P
29	Banoth Naveen	6202044	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
30	Barigela srinath	6202051	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P
31	Bashaveni Pavan Kalyan	6202052	A	P	P	P	A	P	P	A	P	P	P	P	P	P	P
32	Bavu shivaprasad	6202053	A	P	P	P	A	A	P	P	P	P	P	P	A	P	P
33	Bembeeru Arun	6202054	A	P	P	A	A	A	P	P	P	P	P	P	P	P	P
34	Bhukya Santhosh	6202056	P	A	P	A	P	A	P	P	P	A	P	P	P	P	P
35	BHUKYA SURESH	6202057	P	A	P	A	P	P	A	P	A	P	P	P	P	P	P
36	Bhuma saiteja	6202058	P	P	P	A	P	P	A	A	P	P	P	P	P	P	P
37	Bijili sandhya	6202059	P	P	P	P	P	P	A	A	A	P	P	P	P	P	P
38	Boda Narender	6202061	A	P	A	P	P	P	P	A	P	P	P	A	P	P	P
39	Boda swarna	6202062	A	P	A	P	P	P	P	A	P	P	P	A	P	P	P
40	BODDU SATHWIK KUMAR	6202063	A	A	P	P	P	P	P	P	P	P	P	P	P	A	P
41	Bogam Kartheek	6202064	A	P	P	P	P	P	A	P	P	P	P	A	P	P	A
42	Bolumalla Anil	6202072	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P
43	Bommakanti Uday kiran	6202074	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
44	Mahesh bonala	6202075	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P
45	Boorla Nishanth	6202077	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
46	BOSU AJAY KUMAR	6202078	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
47	Bulle Ajay	6202081	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P
48	Ch.Pravalika	6202083	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
49	Cheepathi prem	6202084	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
50	CHENNURI RAJU	6202087	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P
51	CHENNURI RAJU	6202087	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
52	cheruku Vijaykumar	6202088	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P



Attendance Sheet for Ethical Hacking Value Added Course

		Month	04	04	04	04	04	05	05	05	05	05	05	05	05	05	05
		Date	25	27	28	29	30	02	03	04	05	06	07	09	10	11	12
S.No	Registered Student Name	Hall Ticket Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
53	chikkudu.dileep	6202089	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P
54	chilagani srikar	6202090	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
55	Chinthala Ranjith	6202092	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
56	ChippaSaikoushik	6202094	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
57	Damera Divya	6202096	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
58	DANDIKOLA DINESH	6202099	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P
59	Datla Laxman	6202100	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
60	Datla Ramu	6202101	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P
61	Dayyala Ganesh	6202102	P	P	P	P	P	P	P	A	A	P	P	P	P	P	A
62	Deshini sandeep	6202105	P	P	P	P	P	P	P	A	P	P	A	A	P	P	P
63	Dhadigela Rakesh	6202108	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
64	Ellendula sai kiran	6202124	A	A	P	P	P	P	P	P	P	P	P	P	A	P	P
65	Jimada sandeep	6202175	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P
66	Kaviri Raveena	6202196	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P
67	Kunde Karthik	6202219	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
68	Pasula Vikas	6202307	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
69	Singarapu Akshay	6202346	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P
70	Singarapu Akshay	6202348	A	A	P	P	P	P	P	A	P	P	P	P	P	P	P
71	Akhil velpugonda	6202382	A	A	P	P	P	P	P	A	P	P	P	P	P	P	P
72	Dandiga Devender	6202098	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P

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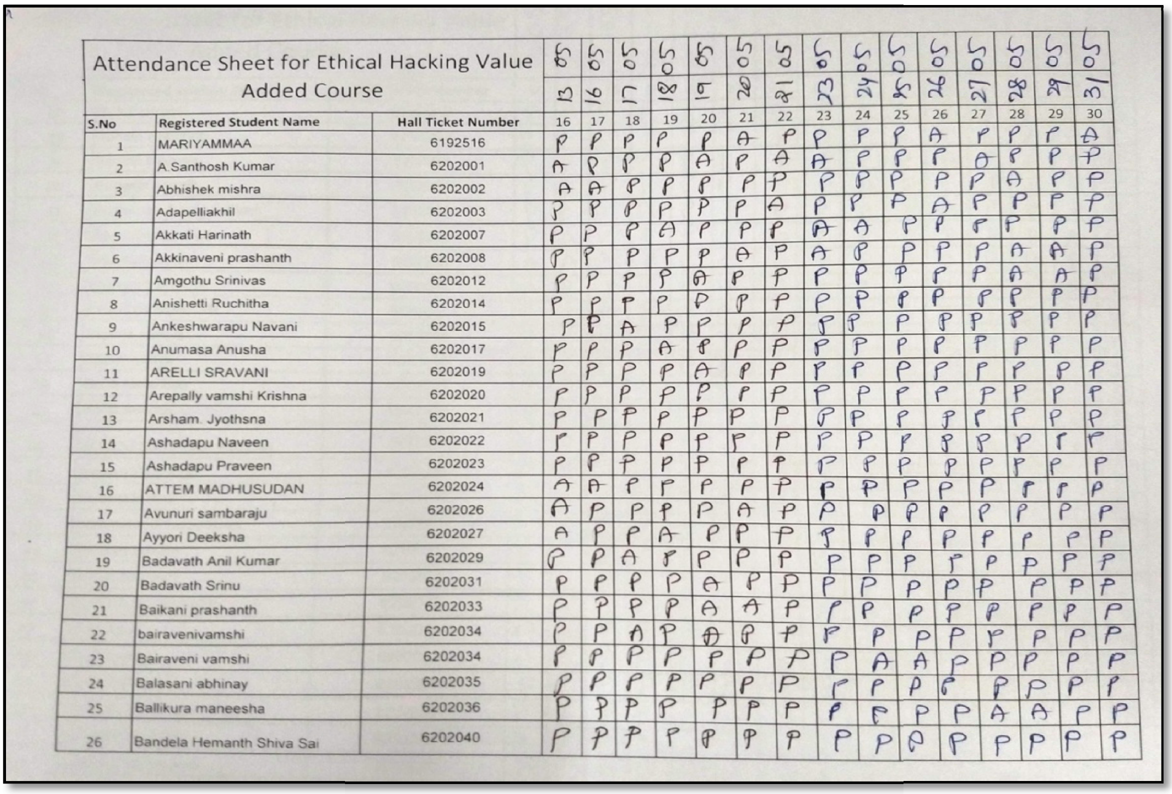

Attendance Sheet for Ethical Hacking Value Added Course

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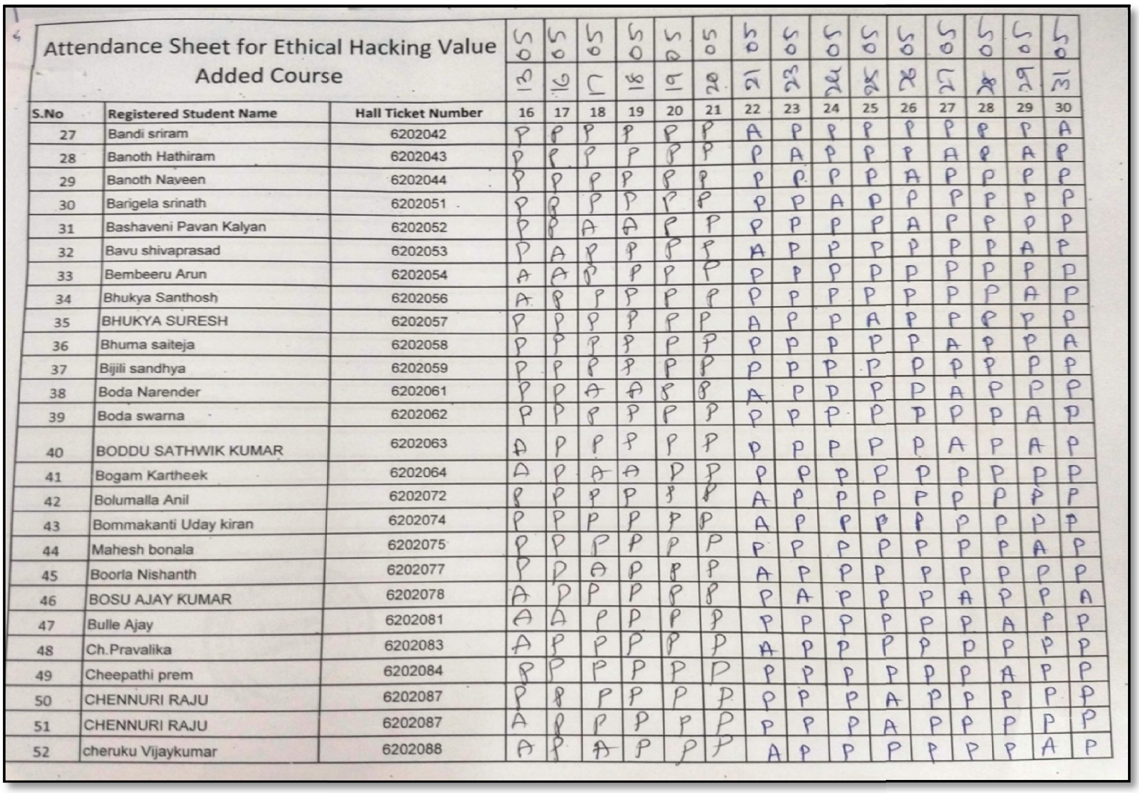
			13	16	17	18	19	20	21	23	24	25	26	27	28	29	31
S.No	Registered Student Name	Hall Ticket Number	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	MARIYAMMAA	6192516	P	P	P	P	P	A	P	P	P	P	A	P	P	P	A
2	A.Santhosh Kumar	6202001	A	P	P	P	A	P	A	A	P	P	P	A	P	P	P
3	Abhishek mishra	6202002	A	A	P	P	P	P	P	P	P	P	P	P	A	P	P
4	Adapelliakhil	6202003	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P
5	Akkati Harinath	6202007	P	P	P	A	P	P	P	A	A	P	P	P	P	P	P
6	Akkinaveni prashanth	6202008	P	P	P	P	P	A	P	A	P	P	P	P	A	A	P
7	Amgothu Srinivas	6202012	P	P	P	P	A	P	P	P	P	P	P	P	A	A	P
8	Anishetti Ruchitha	6202014	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	Ankeshwarapu Navani	6202015	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
10	Anumasa Anusha	6202017	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
11	ARELLI SRAVANI	6202019	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
12	Arepally vamshi Krishna	6202020	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Arsham. Jyothsna	6202021	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	Ashadapu Naveen	6202022	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	Ashadapu Praveen	6202023	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	ATTEM MADHUSUDAN	6202024	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P
17	Avunuri sambaraju	6202026	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P
18	Ayyori Deeksha	6202027	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P
19	Badavath Anil Kumar	6202029	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
20	Badavath Srinu	6202031	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
21	Baikani prashanth	6202033	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P
22	bairavenivamshi	6202034	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P
23	Bairaveni vamshi	6202034	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P
24	Balasani abhinay	6202035	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	Ballikura maneesha	6202036	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P
26	Bandela Hemanth Shiva Sai	6202040	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P



Attendance Sheet for Ethical Hacking Value Added Course

			05	05	05	05	05	05	05	05	05	05	05	05	05	05	05
			13	16	17	18	19	20	21	23	24	25	26	27	28	29	31
S.No	Registered Student Name	Hall Ticket Number	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
27	Bandi sriram	6202042	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A
28	Banoth Hathiram	6202043	P	P	P	P	P	P	P	A	P	P	P	A	P	A	P
29	Banoth Naveen	6202044	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
30	Barigela srinath	6202051	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
31	Bashaveni Pavan Kalyan	6202052	P	P	A	A	P	P	P	P	P	P	A	P	P	P	P
32	Bavu shivaprasad	6202053	P	A	P	P	P	P	A	P	P	P	P	P	P	A	P
33	Bembeeru Arun	6202054	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P
34	Bhukya Santhosh	6202056	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P
35	BHUKYA SURESH	6202057	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P
36	Bhuma saiteja	6202058	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A
37	Bijili sandhya	6202059	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	Boda Narender	6202061	P	P	A	A	P	P	A	P	P	P	P	A	P	P	P
39	Boda swarna	6202062	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P
40	BODDU SATHWIK KUMAR	6202063	A	P	P	P	P	P	P	P	P	P	P	A	P	A	P
41	Bogam Kartheek	6202064	A	P	A	A	P	P	P	P	P	P	P	P	P	P	P
42	Bolumalla Anil	6202072	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
43	Bommakanti Uday kiran	6202074	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
44	Mahesh bonala	6202075	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P
45	Boorla Nishanth	6202077	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P
46	BOSU AJAY KUMAR	6202078	A	P	P	P	P	P	P	A	P	P	P	A	P	P	A
47	Bulle Ajay	6202081	A	A	P	P	P	P	P	P	P	P	P	P	A	P	P
48	Ch.Pravalika	6202083	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P
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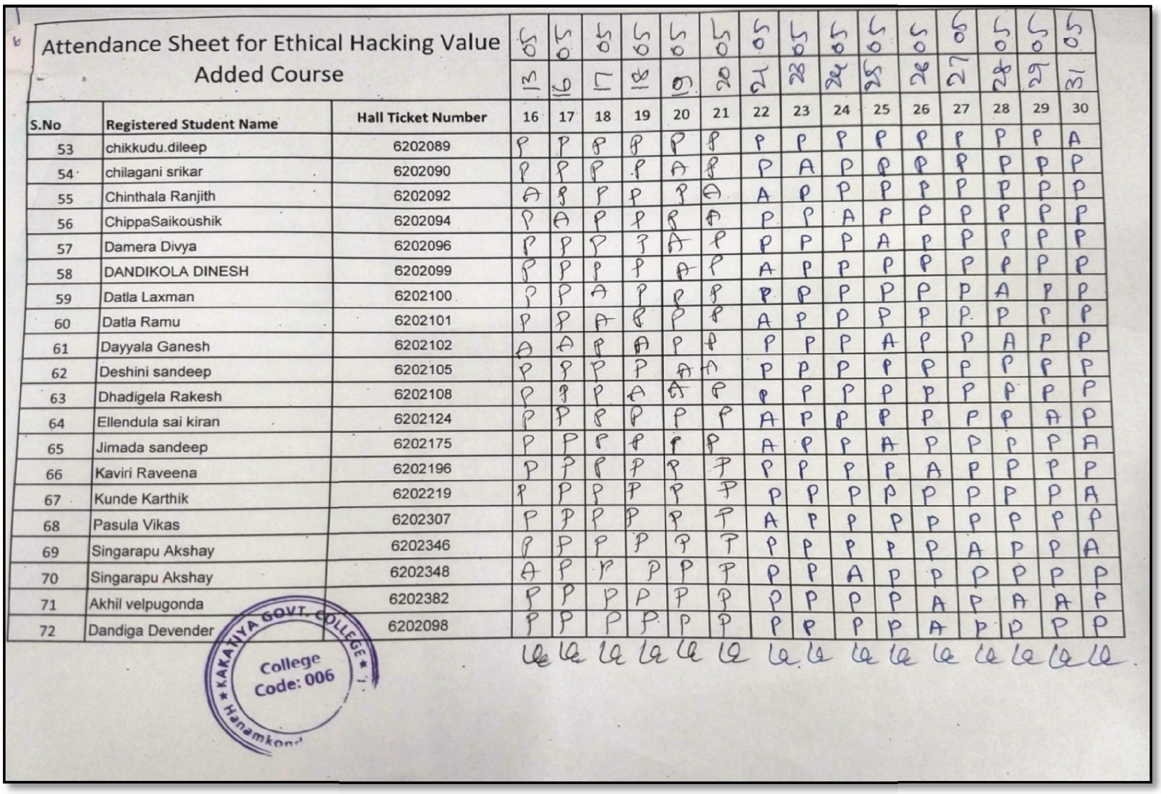
50	CHENNURI RAJU	6202087	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
51	CHENNURI RAJU	6202087	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P
52	cheruku Vijaykumar	6202088	A	P	A	P	P	P	A	P	P	P	P	P	P	A	P



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S.No	Registered Student Name	Hall Ticket Number	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
53	chikkudu.dileep	6202089	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
54	chilagani srikar	6202090	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P
55	Chinthala Ranjith	6202092	A	P	P	P	P	A	A	P	P	P	P	P	P	P	P
56	ChippaSaikoushik	6202094	P	A	P	P	P	A	P	P	A	P	P	P	P	P	P
57	Damera Divya	6202096	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P
58	DANDIKOLA DINESH	6202099	P	P	P	P	A	P	A	P	P	P	P	P	P	P	P
59	Datla Laxman	6202100	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P
60	Datla Ramu	6202101	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P
61	Dayyala Ganesh	6202102	A	A	P	A	P	P	P	P	P	A	P	P	A	P	P
62	Deshini sandeep	6202105	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P
63	Dhadigela Rakesh	6202108	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P
64	Ellendula sai kiran	6202124	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P
65	Jimada sandeep	6202175	P	P	P	P	P	P	A	P	P	A	P	P	P	P	A
66	Kaviri Raveena	6202196	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
67	Kunde Karthik	6202219	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
68	Pasula Vikas	6202307	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
69	Singarapu Akshay	6202346	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A
70	Singarapu Akshay	6202348	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P
71	Akhil velpugonda	6202382	P	P	P	P	P	P	P	P	P	P	A	P	A	A	P
72	Dandiga Devender	6202098	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
			la	la	la	la	la	la	la	la	la	la	la	la	la	la	la

KAKATIYA GOVT. COLLEGE
College Code: 006
Hanamkonda

KAKATIYA GOVERNMENT COLLEGE

HANAMKONDA, DIST: HANAMKONDA
(Affiliated to Kakatiya University)

Trojans
DDoS Attacks
Virus
Worms
Spam
CEH
Defend your Network Against Hackers.
Master the Hacking Technologies.
Become a Certified Ethical Hacker.
Ethical Hacking and Countermeasures

Value Added Course on Ethical Hacking

Resource Persons: 1. K. Sravana Kumari
2. V. Ramesh

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

Topics

- Crisis
- Computer Crimes
- Hacker Attacks
- Modes of Computer Security
  - Password Security
  - Network Security
  - Web Security
  - Distributed Systems Security
  - Database Security

Crisis

- Internet has grown very fast and security has lagged behind.
- Legions of hackers have emerged as impedance to entering the hackers club is low.
- It is hard to trace the perpetrator of cyber attacks since the real identities are camouflaged
- It is very hard to track down people because of the ubiquity of the network.
- Large scale failures of internet can have a catastrophic impact on the economy which relies heavily on electronic transactions

Computer Crime – The Beginning

- In 1988 a "worm program" written by a college student shut down about 10 percent of computers connected to the Internet. This was the beginning of the era of cyber attacks.
- Today we have about 10,000 incidents of cyber attacks which are reported and the number grows.

Computer Crime - 1994

- A 16-year-old music student called Richard Pryce, better known by the hacker alias Datastream Cowboy, is arrested and charged with breaking into hundreds of computers including those at the Griffiths Air Force base, Nasa and the Korean Atomic Research Institute. His online mentor, "Kuji", is never found.
- Also this year, a group directed by Russian hackers broke into the computers of Citibank and transferred more than $10 million from customers' accounts. Eventually, Citibank recovered all but $400,000 of the pilfered money.

Computer Crime - 1995

- In February, Kevin Mitnick is arrested for a second time. He is charged with stealing 20,000 credit card numbers. He eventually spends four years in jail and on his release his parole conditions demand that he avoid contact with computers and mobile phones.
- On November 15, Christopher Pile becomes the first person to be jailed for writing and distributing a computer virus. Mr Pile, who called himself the Black Baron, was sentenced to 18 months in jail.
- The US General Accounting Office reveals that US Defense Department computers sustained 250,000 attacks in 1995.

Computer Crime - 1999

- In March, the Melissa virus goes on the rampage and wreaks havoc with computers worldwide. After a short investigation, the FBI tracks down and arrests the writer of the virus, a 29-year-old New Jersey computer programmer, David L Smith.
- More than 90 percent of large corporations and government agencies were the victims of computer security breaches in 1999

Computer Crime - 2000

- In February, some of the most popular websites in the world such as Amazon and Yahoo are almost overwhelmed by being flooded with bogus requests for data.
- In May, the ILOVEYOU virus is unleashed and clogs computers worldwide. Over the coming months, variants of the virus are released that manage to catch out companies that didn't do enough to protect themselves.
- In October, Microsoft admits that its corporate network has been hacked and source code for future Windows products has been seen.

Why Security?

- Some of the sites which have been compromised
  - U.S. Department of Commerce
  - NASA
  - CIA
  - Greenpeace
  - Motorola
  - UNICEF
  - Church of Christ …
- Some sites which have been rendered ineffective
  - Yahoo
  - Microsoft
  - Amazon …

Why do Hackers Attack?

- Because they can
  - A large fraction of hacker attacks have been pranks
- Financial Gain
- Espionage
- Venting anger at a company or organization
- Terrorism

Types of Hacker Attack

- Active Attacks
  - Denial of Service
  - Breaking into a site
    - Intelligence Gathering
    - Resource Usage
    - Deception
- Passive Attacks
  - Sniffing
    - Passwords
    - Network Traffic
    - Sensitive Information
  - Information Gathering

Modes of Hacker Attack

- Over the Internet
- Over LAN
- Locally
- Offline
- Theft
- Deception

Spoofing

Definition:

An attacker alters his identity so that some one thinks he is some one else

- Email, User ID, IP Address, …
- Attacker exploits trust relation between user and networked machines to gain access to machines

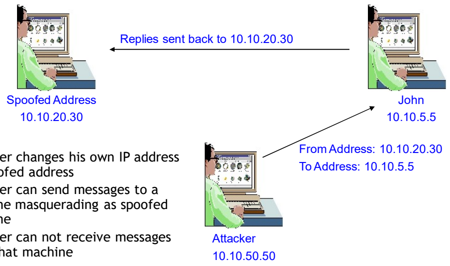
Types of Spoofing:

1. IP Spoofing:
2. Email Spoofing
3. Web Spoofing

IP Spoofing – Flying-Blind Attack

Definition:

Attacker uses IP address of another computer to acquire information or gain access

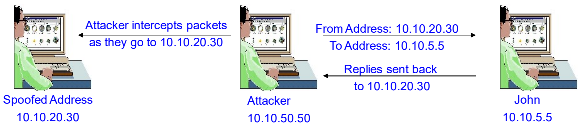


- Attacker changes his own IP address to spoofed address
- Attacker can send messages to a machine masquerading as spoofed machine
- Attacker can not receive messages from that machine

IP Spoofing – Source Routing

Definition:

Attacker spoofs the address of another machine and inserts itself between the attacked machine and the spoofed machine to intercept replies



- The path a packet may change can vary over time
- To ensure that he stays in the loop the attacker uses source routing to ensure that the packet passes through certain nodes on the network

Email Spoofing

Definition:

Attacker sends messages masquerading as some one else

What can be the repercussions?

Types of Email Spoofing:

1. Create an account with similar email address
   - Sanjaygoel@yahoo.com: A message from this account can perplex the students
2. Modify a mail client
   - Attacker can put in any return address he wants to in the mail he sends
3. Telnet to port 25
   - Most mail servers use port 25 for SMTP. Attacker logs on to this port and composes a message for the user.

Web Spoofing

- Basic
  - Attacker registers a web address matching an entity e.g. votebush.com, geproducts.com, gesucks.com
- Man-in-the-Middle Attack
  - Attacker acts as a proxy between the web server and the client
  - Attacker has to compromise the router or a node through which the relevant traffic flows
- URL Rewriting
  - Attacker redirects web traffic to another site that is controlled by the attacker
  - Attacker writes his own web site address before the legitimate link
- Tracking State
  - When a user logs on to a site a persistent authentication is maintained
  - This authentication can be stolen for masquerading as the user

Web Spoofing – Tracking State

- Web Site maintains authentication so that the user does not have to authenticate repeatedly
- Three types of tracking methods are used:

1. Cookies: Line of text with ID on the users cookie file
   - Attacker can read the ID from users cookie file
2. URL Session Tracking: An id is appended to all the links in the website web pages.
   - Attacker can guess or read this id and masquerade as user
3. Hidden Form Elements
   - ID is hidden in form elements which are not visible to user
   - Hacker can modify these to masquerade as another user

Session Hijacking

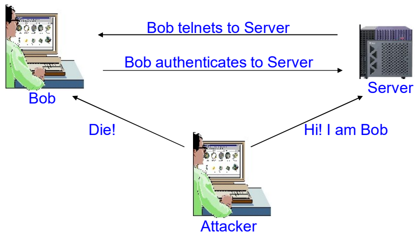
Definition:

Process of taking over an existing active session

Modus Operandi:

1. User makes a connection to the server by authenticating using his user ID and password.
2. After the users authenticate, they have access to the server as long as the session lasts.
3. Hacker takes the user offline by denial of service
4. Hacker gains access to the user by impersonating the user

Session Hijacking



Bob telnets to Server

Bob authenticates to Server

Bob

Server

Die!

Hi! I am Bob

Attacker

- Attacker can
  - monitor the session
  - periodically inject commands into session
  - launch passive and active attacks from the session

Session Hijacking – How Does it Work?

- Attackers exploit sequence numbers to hijack sessions
- Sequence numbers are 32-bit counters used to:
  - tell receiving machines the correct order of packets
  - Tell sender which packets are received and which are lost
- Receiver and Sender have their own sequence numbers
- When two parties communicate the following are needed:
  - IP addresses
  - Port Numbers
  - Sequence Number
- IP addresses and port numbers are easily available so once the attacker gets the server to accept his guesses sequence number he can hijack the session.

Denial of Service (DOS) Attack

Definition:

Attack through which a person can render a system unusable or significantly slow down the system for legitimate users by overloading the system so that no one else can use it.

Types:

1. Crashing the system or network
   - Send the victim data or packets which will cause system to crash or reboot.
2. Exhausting the resources by flooding the system or network with information
   - Since all resources are exhausted others are denied access to the resources
3. Distributed DOS attacks are coordinated denial of service attacks involving several people and/or machines to launch attacks

Denial of Service (DOS) Attack

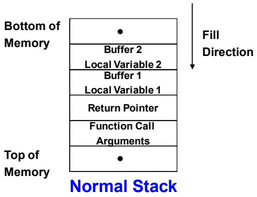
Types:

1. Ping of Death
2. SSPing
3. Land
4. Smurf
5. SYN Flood
6. CPU Hog
7. Win Nuke
8. RPC Locator
9. Jolt2
10. Bubonic
11. Microsoft Incomplete TCP/IP Packet Vulnerability
12. HP Openview Node Manager SNMP DOS Vulneability
13. Netscreen Firewall DOS Vulnerability
14. Checkpoint Firewall DOS Vulnerability

Buffer Overflow Attacks

- This attack takes advantage of the way in which information is stored by computer programs
- An attacker tries to store more information on the stack than the size of the buffer

How does it work?



Bottom of Memory

•

Buffer 2
Local Variable 2

Buffer 1
Local Variable 1

Return Pointer

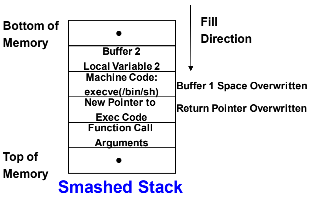
Function Call Arguments

•

Top of Memory

Fill Direction

Normal Stack



Bottom of Memory

•

Buffer 2
Local Variable 2

Machine Code: execve(/bin/sh)

New Pointer to Exec Code

Function Call Arguments

•

Top of Memory

Fill Direction

Buffer 1 Space Overwritten

Return Pointer Overwritten

Smashed Stack

Buffer Overflow Attacks

- Programs which do not do not have a rigorous memory check in the code are vulnerable to this attack
- Simple weaknesses can be exploited
  - If memory allocated for name is 50 characters, someone can break the system by sending a fictitious name of more than 50 characters
- Can be used for espionage, denial of service or compromising the integrity of the data

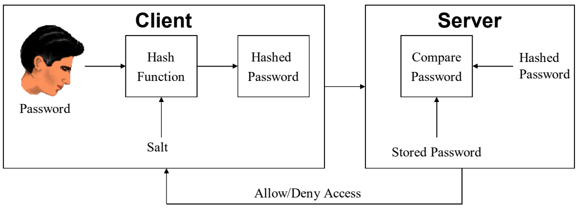
Examples

- NetMeeting Buffer Overflow
- Outlook Buffer Overflow
- AOL Instant Messenger Buffer Overflow
- SQL Server 2000 Extended Stored Procedure Buffer Overflow

Password Attacks

- A hacker can exploit a weak passwords & uncontrolled network modems easily
- Steps
  - Hacker gets the phone number of a company
  - Hacker runs war dialer program
    - If original number is 555-5532 he runs all numbers in the 555-55xx range
    - When modem answers he records the phone number of modem
  - Hacker now needs a user id and password to enter company network
    - Companies often have default accounts e.g. temp, anonymous with no password
    - Often the root account uses company name as the password
    - For strong passwords password cracking techniques exist

Password Security



- Password hashed and stored
  - Salt added to randomize password & stored on system
- Password attacks launched to crack encrypted password

Password Attacks - Process

- Find a valid user ID
- Create a list of possible passwords
- Rank the passwords from high probability to low
- Type in each password
- If the system allows you in – success !
- If not, try again, being careful not to exceed password lockout (the number of times you can guess a wrong password before the system shuts down and won’t let you try any more)

Password Attacks - Types

- Dictionary Attack
  - Hacker tries all words in dictionary to crack password
  - 70% of the people use dictionary words as passwords
- Brute Force Attack
  - Try all permutations of the letters & symbols in the alphabet
- Hybrid Attack
  - Words from dictionary and their variations used in attack
- Social Engineering
  - People write passwords in different places
  - People disclose passwords naively to others
- Shoulder Surfing
  - Hackers slyly watch over peoples shoulders to steal passwords
- Dumpster Diving
  - People dump their trash papers in garbage which may contain information to crack passwords

Conclusions

- Computer Security is a continuous battle
  - As computer security gets tighter hackers are getting smarter
- Very high stakes

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HANUMAKONDA, DIST.HANUMAKONDA

(Affiliated to Kakatiya University, Warangal Accredited with ‘B$^+$’ grade by NAAC)

Department of Computer Science & Applications

CERTIFICATE

This is to certify that Mr/Ms ____ has Successfully completed “ *Ethical Hacking* ” course organized by Department of Computer Science and Applications of Kakatiya Government College, Hanumakonda during the period 25-04-2022 to 31-05-2022.

Co-ordinator

Dept. of Incharge

Incharge
Dept. of Computer Science
Kakatiya Government College
Hanamkonda, Warangal.

Principal

PRINCIPAL
KAKATIYA GOVT. COLLEGE
Hanamkonda.