BACHELOR OF COMPUTER APPLICATIONS
(BCA)

(Revised Syllabus)

ASSIGNMENTS

(July - 2022 & January - 2023)

(BCS-062,   MCS-022,

BCSL-063)

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THE PEOPLE'S
UNIVERSITY

SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068

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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.

2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA Programme Guide.

3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the BCA Programme Guide.

Course Code	:	**BCS-062**
Course Title	:	**E-Commerce**
Assignment Number	:	**BCA(6)062/Assignment/2022-23**
Maximum Marks	:	**100**
Weightage	:	**25%**
Last Date of Submission	:	**31ˢᵗ October, 2022 (For July, Session)**
		15ᵗʰ April, 2023 (For January, Session)

This assignment has two questions for a total of 80 marks. Answer both the questions. Rest 20 marks are for viva voce.

Q1. Explain the process of designing a secure E-Commerce portal. Make necessary assumptions as well as list them**.** **(40)**

Q2. Give any one example of a Mobile APP using which you can translate at least 5 languages to each other. List the features of that APP which you liked and those which you did not like. Also, suggest two desirable features. **(40)**

Answer all the questions of the assignment having 80 marks in total. 20 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Answer of each part of the question should be confined to about 300 words.

Q1. Discuss the key characteristics of a modern operating system. **(4)**

Q2. Discuss the basic design issues in distributed OS which are different from traditional OS and network OS and how are they implemented? **(5)**

Q3. Explain the memory management model of the Linux Operating System. **(8)**

Q4. **(a)** What is the default location of the print spooler in Windows NT ? **(2)**

(b) Explain virtual to physical address mapping concepts with the help of an abstract model. Make appropriate diagrams if required. **(5)**

Q5. Answer the following questions related to Linux commands: **(5)**
- List all the directories using echo command only
- List all the files within a directory including hidden files
- Display a Calendar for a specific month and year
- What will be the output of the following:
  who| more
  who –a
  cat file name | more ℓs- ℓ > temp

- What options can be used with a *grep* command? Show output with each option

Q6. **(a)** What are the objectives of dynamic addressing and directory services in Windows 2000? How are they configured? **(4)**

(b) How is static IP address different from dynamic IP address? **(2)**

Q7. What is the meaning of map drive in Windows 2000? What are the benefits in mapping a network drive? Write all the steps for mapping a network drive.   ? **(5)**

Q8. Explain functions of Primary Domain Controller. Also, explain the role of the 'primary domain controller' and 'backup domain controller' in enhancing security of window 2000 server. **(6)**

Q9. Write a Shell Script program to find Greatest Common Divisor (GCD) for any two numbers. Ensure that your script carries out basic error checking. **(7)**

Q10. What are the three strategies that can be used to authenticate a user to a computer system? Describe how authentication can be done using hardware tokens. **(6)**

Q11. (a) Differentiate between dial-up connection and VPN connection for remote access. List the requirements to set up a VPN connection. Explain the steps for configuring Windows 2000 VPN **(6)**

(b) Discuss the protocols and tools for providing secure VPN services **(4)**

Q12. What are intrusion detection systems (IDS)? What IDS can do? **(5)**

Q13. Define IPSec? What are its features? Discuss its implementation in Windows 2000. **(6)**

Course Code	:	BCSL-063
Course Title	:	Operating System Networking Management Lab
Assignment Number	:	BCA(6)/L-063/Assignment/2022-23
Maximum Marks	:	50
Weightage	:	25%
Last date of Submission	:	31st October, 2022 (For July, Session)
	:	15th April, 2023 (For January, Session)

Note: Answer all the questions in the assignment having 40 marks in total. 10 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Make suitable assumption if necessary.

Q1. (a) Run the following commands and write/show output **(5)**
- chmod
- rcp
- diskperf
- arp
- nslookup

(b) Explore the following directories and write its contents: **(5)**
- (i) /bin
- (ii) /use/bin
- (iii) /sbn
- (iv) /temp
- (v) /boot

(c) Answer the following questions : **(5)**
- List all the files within a directory including hidden files
- Which command is used to show files or directory , size, modified date and time, file permission,etc.
- Sort file or directory by file size
- What is the output of: ls-al | more ?
- How to kill a process?

Q2. (a) Write a shell script to check a proper utilization of disk space and send an email to the user currently logged in. **(4)**

(b) (i) write a shell script that prompts the user for a name of a file or directory and reports what type of this file is : regular file, a directory, or another type of file. **(6)**

(ii) Execute an *ls* command against the file or directory with any two options you are aware of.

Q3.   Perform the following tasks: **(15)**

(a) Set the execution time of two jobs so that it can run automatically tomorrow one at 11:00 a.m. and another at 1:00 p.m. After this setting, how can you change the time of execution of the job?

(b) Add different user's and groups. Also configure their permissions.

(c) Share any folder available in your directory. Also configure its share permissions for different users.

(d) Configure the DHCP Server Service.

(e) Monitor the IP Routing status.