	<p align="center">SVKM's NMIMS Mukesh Patel School of Technology Management & Engineering / School of Technology Management & Engineering</p>		
B. Tech/MBA Tech	Workbook		Academic Year- 2024-25
Year:-First	Subject:- Programming for Problem Solving	Semester:- First	

Experiment: 7

PART B

(PART B: TO BE COMPLETED AND SUBMITTED BY STUDENTS)


Students must execute all the programs, write executed code in the workbook, and submit part B of experiment 7 on the student portal. The filename should be PPS_batch_rollno_experimentno. Example: PPS_A1_A001_P7

Roll No.:	Name:
Prog/Yr/Sem:	Batch:
Date of Experiment:	Date of Submission:

Aim: Programming using functions and strings (character array)

Tasks:


Sr. No.	Problem Statement
1	Write a function that takes one integer parameter as a year, and displays its leap year or not.
2	Write a function that takes two integer parameters x & y, and returns the result X^Y . (Don't use pow())
3	Implement a program using user defined function to return largest of three floating-point numbers.
4	WAP using user defined function to calculate and return factorial of a given integer.
5	Write a menu driven program to compute sum of digits of a number, to find reverse of a number, to count number of digits by writing three different functions with parameters and return type.
6	Write user defined function "Search_Element" to search element is present in 1D array or not. Search function accepts array, size of array and key to search as parameters.
7	Write a program to print Fibonacci series up to n using recursion.

	<p align="center">SVKM's NMIMS Mukesh Patel School of Technology Management & Engineering / School of Technology Management & Engineering</p>		
B. Tech/MBA Tech	Workbook		Academic Year- 2024-25
Year:-First	Subject:- Programming for Problem Solving	Semester:- First	


8	<p>Write one program to perform following operations on strings (Character Arrays)</p> <ul style="list-style-type: none"> a) To find length of a string b) To compare two string for equality c) To Copy one string to other d) To concatenate two string e) To find reverse of a String
9	WAP to copy one string to another string without using string handling function and display copied string (Character Arrays).

Executed Code, Input and Output

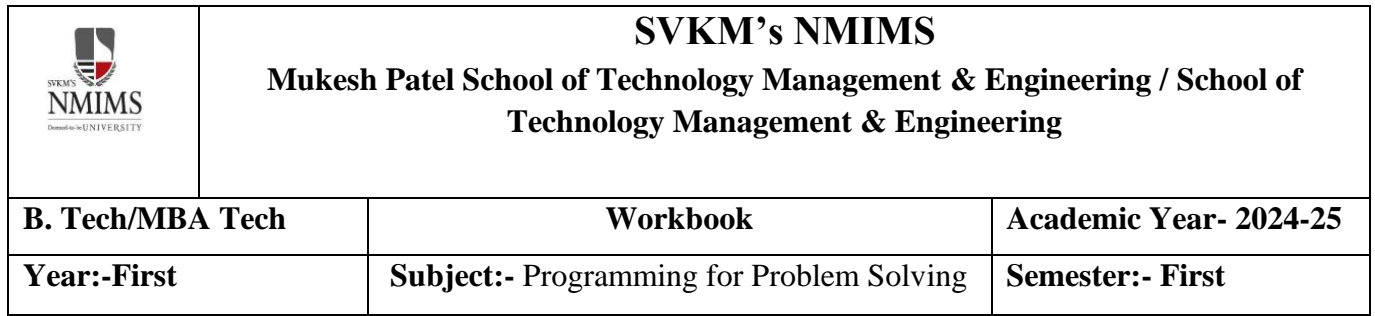
1.	Write a function that takes one integer parameter as a year, and displays its leap year or not.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	
2.	Write a function that takes two integer parameters x & y, and returns the result X^Y . (Don't use pow())
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	

	<p style="text-align: center;">SVKM's NMIMS Mukesh Patel School of Technology Management & Engineering / School of Technology Management & Engineering</p>		
B. Tech/MBA Tech	Workbook		Academic Year- 2024-25
Year:-First	Subject:- Programming for Problem Solving	Semester:- First	

3.	Implement a program using user defined function to return largest of three floating-point numbers.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	
4.	WAP using user defined function to calculate and return factorial of a given integer.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	
5.	Write a menu driven program to compute sum of digits of a number, to find reverse of a number, to count number of digits by writing three different functions with parameters and return type.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	

	<p style="text-align: center;">SVKM's NMIMS Mukesh Patel School of Technology Management & Engineering / School of Technology Management & Engineering</p>		
B. Tech/MBA Tech	Workbook		Academic Year- 2024-25
Year:-First	Subject:- Programming for Problem Solving	Semester:- First	

6.	Write user defined function “Search_Element” to search element is present in 1D array or not. Search function accepts array, size of array and key to search as parameters.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	
7.	Write a program to print Fibonacci series up to n using recursion.
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	
8.	Write one program to perform following operations on strings (Character Arrays) <ul style="list-style-type: none"> a) To find length of a string b) To compare two string for equality c) To Copy one string to other d) To concatenate two string e) To find reverse of a String
<p>Executed Code: - // Paste the executed code here</p> <p>Input Output: - // Paste the input/output of executed code</p>	




Semester:- First

```
#include <iostream>
using namespace std;

float simpleinterest(float, float, float);

float simpleinterest(float p, float t, float r){
    float SI;
    SI = (p*t*r)/100;
    return SI;
}
```

	<p style="text-align: center;">SVKM's NMIMS Mukesh Patel School of Technology Management & Engineering / School of Technology Management & Engineering</p>		
B. Tech/MBA Tech	Workbook		Academic Year- 2024-25
Year:-First	Subject:- Programming for Problem Solving	Semester:- First	

```
int main() {
    float p,t,r,si;
    cout<<"Enter amount time and rate of
           intrest"<<endl;
    cin>>p>>t>>r;

    si=simpleinterest(p,t,r);

    cout<<"Simple Interest is "<<si;
    return 0;
}
```

Output:-

```
Enter amount time and rate of interest
45000 60 12.5
Simple Interest is 337500
```

2. List any six string handling functions and write a program to check string is palindrome or not using string handling function.
3. What is recursion? Write a program to find GCD of a number using recursion.