NATIONAL UNIVERSITY OF MODERN LANGUAGES, ISLAMABAD

Department of Software Engineering

Mid Term Examination- Spring 2021

Roll No:	SP21128	**Class/ Section:**	**BSSE 1st semester e vening**
System ID:	**NUML-S21-35985**	**Program:**	**Software Engineering**
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Course Title:	PROGRAMMING FUNDAMENTELS	**Campus:**	**Islamabad**
Course Code:	SEPF-101		

Instructions:

(1) Be mindful of time. Try to finish your answers within prescribed time. Upload your an swers within 15 minutes after the paper time.
(2) Honestly observe all online examination protocols with your cameras on.
(3) If you upload hand-written answer scripts, write legibly so that so that teachers can c onveniently read and grade your papers.
(4) Be precise and relevant in your answers.

FINAL TERM Examination (2021 NUMS) Date: __/__/20

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Class:- BSSE - 1st Semester Sir Name:- Waris Ali

Subject:- PF (Theory Shift:- Afternoon

Solution Paper

Question No:- 2

```
#include <iostream>
#include <conio.h>
using namespace std;

float input-Radius ()
{
float radius r;
cout << " ***** Land Dimensions *****" << endl;
cout << "Enter the radius in the feet and
inches:";
cin >> radius;
}
float length (float rad)
{
float lengthf, r;
float radiu;
r = rad;
Length = 2* 3.14* r
Cout << " ***** Cost of fencing and Leveling
land*****" << endli
```

```
cout << " length of total fence : " << length
<< endl;

return length;
}
float area (float radi)
{
float r;
r= radi;
float area;
area = 3.14*r*r;
cout << " Area of a circular land: " << area
<< endl;
return area;
}
float calculating_cost_of_fencing (float len)
{
  float_cost_of_fencing;
  float length, len;
  cost_of_fencing = lngth * 50;
cout << " cost of fencing :" << " rupees." << endl;
}
 float Calculating_cost_of_leveling (float ar)
{
float cost_of_leveling;
```

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```
float area, ar;
cost_of_leveling = area * 100;
cout << "cost of leveling;" << cost_of_leveling
<< "Rupees" << endl;
}

int main()
{
float r, l, a;
r = input_radius();
l = length(r);
a = area(r);

calculating_cost_of_fencing(l);
calculating_cost_of_leveling(a);
return 0;
}
```

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Question no 3:-

Part 1

Solution

String is most used ful data type of the C++ it is used stored a seqence of letter and the character like Kisa or 28th is her birthday Three different ways to used string are :-

1) length():- used to find the length of the string

2) Append():- It is used to extend the string by appending at the end of the current value.

3) getline(): It is used to provide getline function to read whole line.

Part b

A process of declearing ~~multi~~ Multiple functions in a same name but different parameters is called function overloading The function with same name must be ~~a~~ differ in one of the following ways

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1) Number of Parameter
2) Types of Parameter
3) Sequence of parameter

function over loading allows the Programmers to assign same name to all function.

Advantages:-

Some advantages of function overloading are

- It provides polymorphism
- It is easier for the programmer to remember as the same function name with different task
- It speeds up the program execution
- It help in code maintainace
- It provide readability and ~~contensistency~~ consistency in a program.

Part 3:.

Yes it is possible to compare the Pointers if they are pointing at the same array. To compare two pointers relational operators are used

Two pointer of same type compare equal if they both are null, both pointed to the same function.

Part 4

Enums

Enums stands for the Enumerations

It is data type where every possible value is defined as a symbolic constance

enums cannot contain structure

Structure

A structure data type is defined as that data type which donot define list of its constants

A structure can be contain enumeration

Question no 2. 1

Solution:-

```
#include <iostream>
#include <conio.h>
using namespace std;
void input (int * arr, int size)
{
  for (int i=0 ; i < size; i++)
{
  std:: cout << " Enter value at index" << i << ":";
std:: cin >>*(arr +i);
}
}
void sum (int * arr , int size)
{
int sum=0;
for (int i=0 ; i < size; i++)
sum += *(arr+i);
cout << " sum of elements of array are:
" << sum << endl;
}
void Print Reverse (int * arr, int size)
{
cout << " In Reversed value of the array
are :\n";
```

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```
for (int i=(size-1); i>=0; i--)
cout << " value of element " << i+1 << " is "
<< *(arr+i) << " and the address is :"
<< arr+i << endl;
cout << endl;
}
void findlargest (int* arr, int size)
{
int max=0;
int index=0;
for (int i=0; i<size; i++)
{
  if (*(arr+i) > max)
{
  max = *(arr+i);
  index = i;
}
}
cout << "In largest element of array
is : " << max << " and at index :" << index
<< endl;
}
int main()
{
const int size = 10;
```

```
int arr[SIZE];

~~declare~~

input(arr, SIZE);

sum(arr, SIZE);

Print Reverse(arr, SIZE);

find largest(arr, SIZE);

return 0;

}.
```