

SECJ 1013 PROGRAMMING TECHNIQUE 1

LAB EXERCISE 4 (4%)

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SECTION: 15

1) Given the following array definition:

```
int values[] = {10, 20, 30, 40, 50};
```

What does each of the following display?

a) `cout<<values[3];`

Answer:

It will display value 40

b) `cout<<++values[1];`

Answer:

It will display value 21

c) `cout<< values[2]++;`

Answer:

It will display value 30

d) `x = 3; cout<<values[++x];`

Answer:

It will display value 50

2) Define an array of strings to store the name of your friends in this class.

a) Initialize the array with 5 names.

Answer:

```
#include <iostream>
using namespace std;
void changeName(char[][25],int);
int main()
{
    Char names[5][25]={"Adib","Zul","Jeson","Jonson","Alif"}
```

b) Print the names.

Answer:

```
for(int i=0;i<5;i++)
{
    cout<<names[i]<<endl;
}
```

c) Write a function to change the names in the array.

```
void changeName(char[][25], int size);
```

Answer:

```
changeName(names,5);
}
void changeName(char names[][25],int size)
{
    cout<<"Enter names to change"<<endl;
    for(int i=0;i<size;i++)
    {
        cin>>names[i];
    }
}
```

3) Write a program that lets the user enter the total rainfall for each of 12 months into an array of doubles. The program should then calculate and display the total rainfall for the year, the average monthly rainfall, and the months with the highest and lowest amounts. Input Validation: Do not accept negative numbers for monthly rainfall figures.

Answer:

```
#include <iostream>
```

```
#include<float.h>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
double rainfall[12],sum=0.0,average,min=DBL_MAX,max=0.0;
```

```
int minindex,maxindex;
```

```
string s[12];
```

```
{ "January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December" };
```

```
cout<<"Enter rainfalls for 12 months"<<endl;
```

```
for(int i=0;i<12;i++)
```

```
{
```

```
    l:cin>>rainfall[i];
```

```
    if(rainfall[i]<0)
```

```
    {
```

```
        cout<<"Negative value is not allowed"<<endl<<"Enter again"<<endl;
```

```
        goto l;
```

```
    }
```

```
    sum+=rainfall[i];
```

```
    if(rainfall[i]>max)
```

```
    {
```

```
        max=rainfall[i];
```

```
        maxindex=i;
```

```
    }
```

```
    if(rainfall[i]<min)
```

```
    {
```

```
        min=rainfall[i];
```

```
        minindex=i;
```

```
    }
```

```
}
```

```
average=sum/12;
```

```
cout<<"Total rainfall is "<<sum<<endl;
```

```
cout<<"Average monthly rainfall is "<<average<<endl;
```

```
cout<<"Month of highest rainfall is "<<s[maxindex]<<endl;
```

```
cout<<"Month of lowest rainfall is "<<s[minindex]<<endl;
```

}