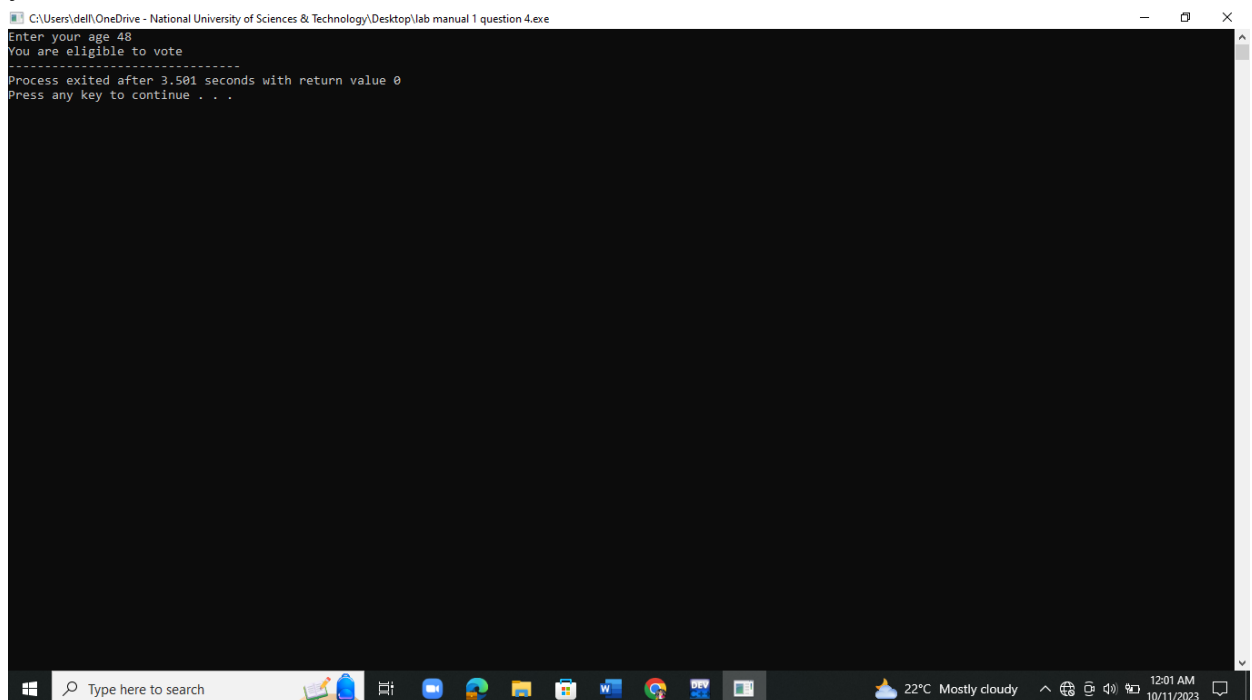


Lab Manual 2

Question 1:

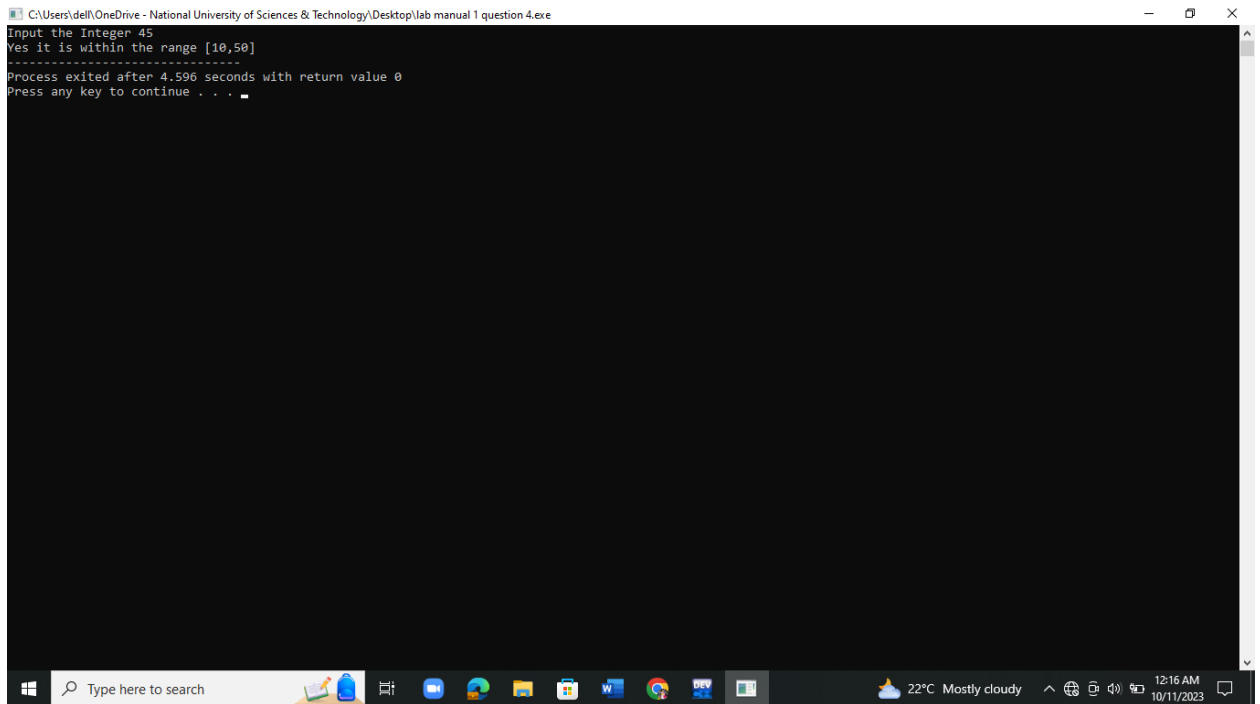
```
1. #include <iostream>
2. using namespace std;
3. int main (){
4.     double age;
5.     cout<<"Enter your age";
6.     cin>>age;// input from the user
7.     if(age>=18){ //specifying the conditions
8.         cout<<"You are eligible to vote";
9.     }
10.    else if(age<=0){
11.        cout<<"Invalid age please re-enter";
12.
13.    }
14.    else {
15.        cout<<"You are not eligible to vote";
16.    }
17.}
```



```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\lab manual 1 question 4.exe
Enter your age 48
You are eligible to vote
-----
Process exited after 3.501 seconds with return value 0
Press any key to continue . . .
```

Question 2:

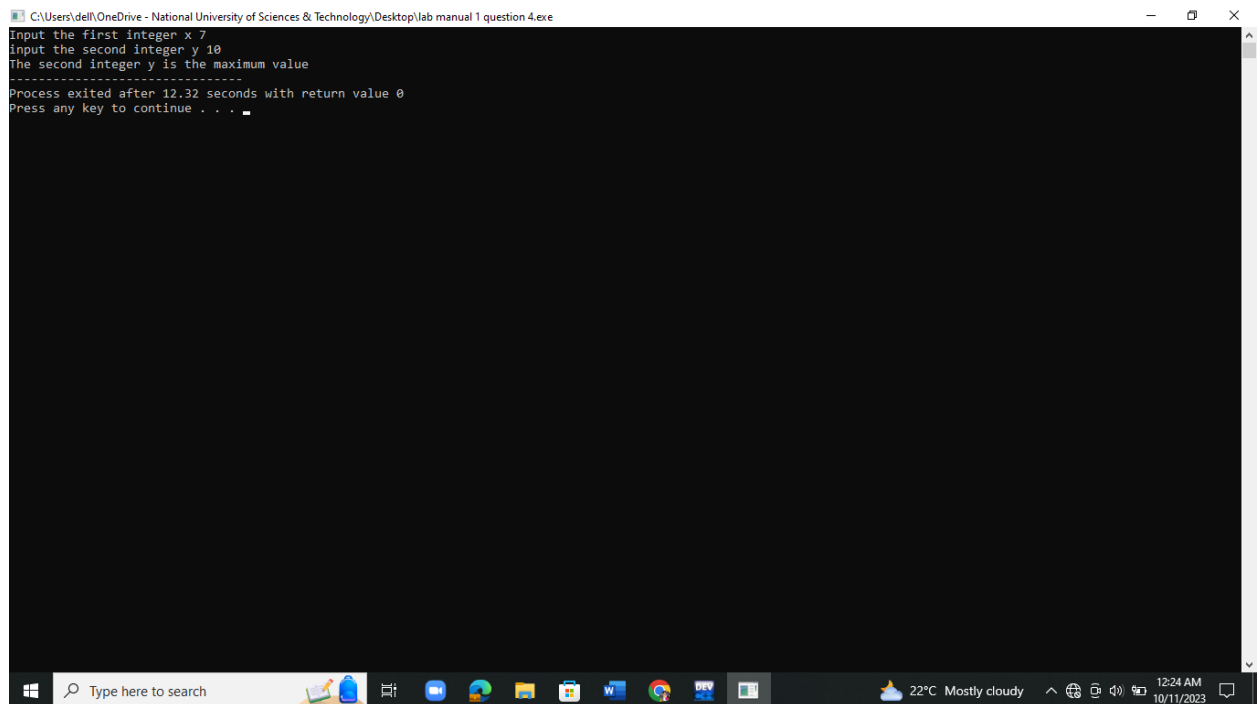
```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     int x; // initialising
5.     cout<<"Input the Integer";
6.     cin>>x;
7.     if(x>=10&& x<=50){ // specifying the conditions
8.         cout<<"Yes it is within the range [10,50]";
9.     }
10.
11.     else {
12.         cout<<"Not within the range";
13.
14.     }
15. }
```



```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\lab manual 1 question 4.exe
Input the Integer 45
Yes it is within the range [10,50]
-----
Process exited after 4.596 seconds with return value 0
Press any key to continue . . .
```

Question 3:

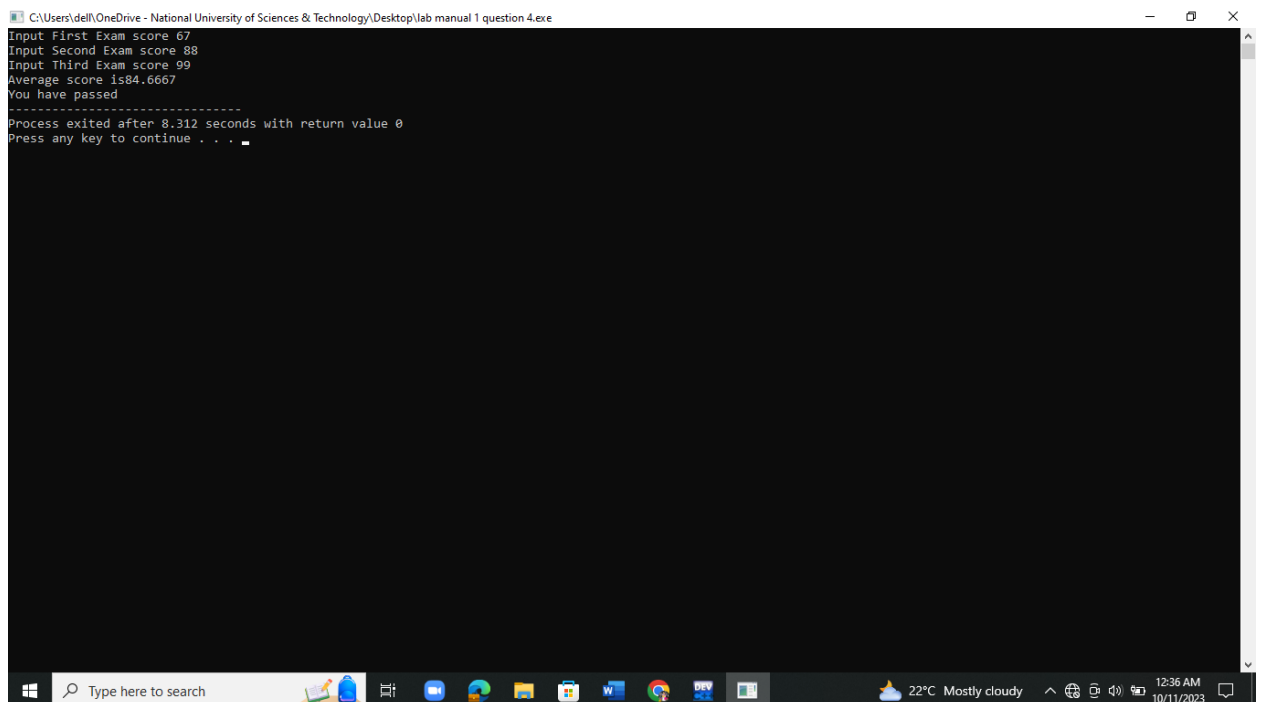
```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     int x,y;
5.     cout<<"Input the first integer x";
6.     cin>>x;
7.     cout<<"input the second integer y";
8.     cin>>y;
9.     if(x>y){
10.         cout<<"The first interger x is the maximum value";
11.     }
12.     else {
13.         cout<<"The second integer y is the maximum value";
14.     }
15. }
```



```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\lab manual 1 question 4.exe
Input the first integer x 7
input the second integer y 10
The second integer y is the maximum value
-----
Process exited after 12.32 seconds with return value 0
Press any key to continue . . .
```

Question 4:

```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     float x,y,z,A; // initialising
5.     cout<<"Input First Exam score"; // information required from the user
6.     cin>>x;
7.     cout<<"Input Second Exam score";
8.     cin>>y;
9.     cout<<"Input Third Exam score";
10.    cin>>z;
11.    A= (x+y+z)/3;
12.    cout<<"Average score is"<<A<<endl;
13.    if(A>=60){// conditions for the passing grade
14.        cout<<"You have passed";
15.    }
16.    else {
17.        cout<<"Below the passing grade";
18.    }
19.}
```



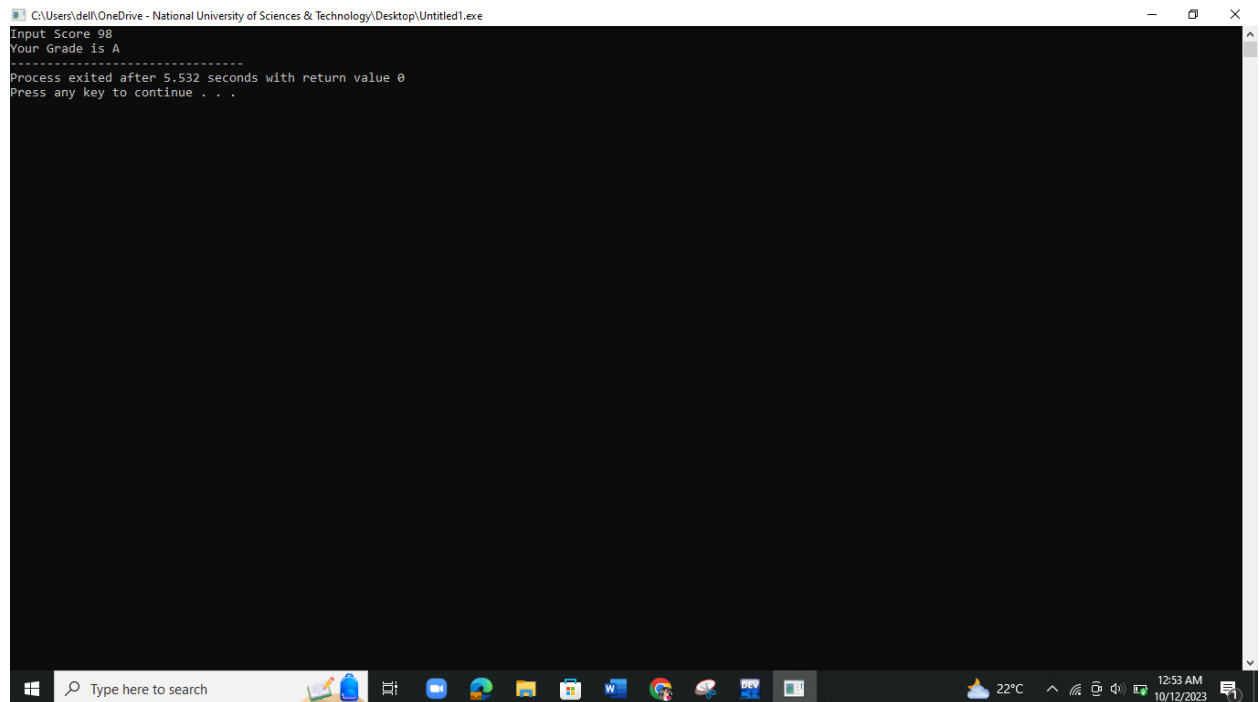
```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\lab manual 1 question 4.exe
Input First Exam score 67
Input Second Exam score 88
Input Third Exam score 99
Average score is84.6667
You have passed
-----
Process exited after 8.312 seconds with return value 0
Press any key to continue . . .
```

Home task:

Question 1:

```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     int x;
5.     cout<<"Input Score";
6.     cin>>x;
7.     if (x>90&&x<=100){
8.         cout<<"Your Grade is A";
9.     }
10.    else if (x>75&&x<=90){
11.        cout<<"Your Grade is B";
12.    }
13.    else if (x>60&&x<=75){
14.        cout<<"Your Grade is C";
15.    }
16.    else if (x>45&&x<=60){
17.        cout<<"Your Grade is D";
18.    }
19.    else if (x>=0&&x<=45){
20.        cout<<"Your Grade is F";
21.    }
22.    else if (x<0){
23.        cout<<"Invalid Score please re-enter";
24.    }
```

25.}



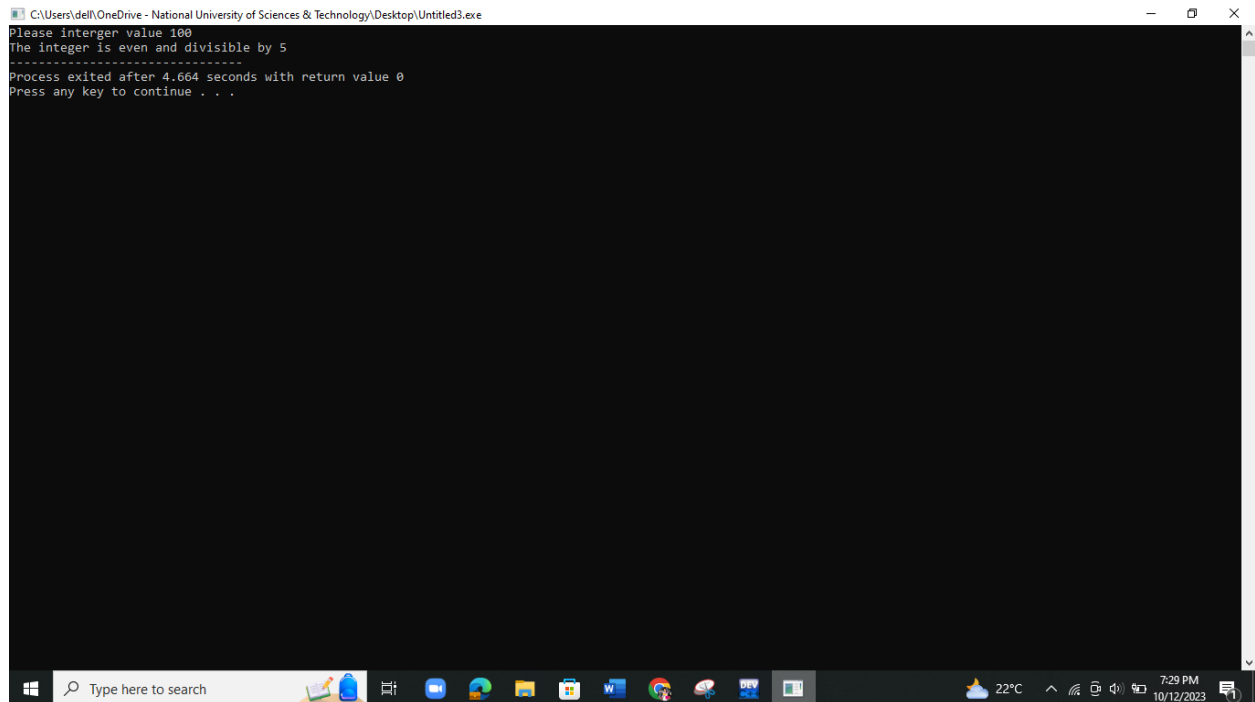
A screenshot of a Windows command prompt window. The title bar shows the file path: C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\Untitled1.exe. The window content displays the following text: "Input Score: 98", "Your Grade is A", a separator line of dashes, "Process exited after 5.532 seconds with return value 0", and "Press any key to continue . . .". The Windows taskbar is visible at the bottom, showing the search bar, taskbar icons, and system tray with a temperature of 22°C and the date/time 12:53 AM 10/12/2023.

```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\Untitled1.exe
Input Score: 98
Your Grade is A
-----
Process exited after 5.532 seconds with return value 0
Press any key to continue . . .
```

Question 2:

1. `#include <iostream>`
2. `using namespace std;`
3. `int main(){`
4. `int x;`
5. `cout<<"Please interger value";`
6. `cin>>x;`
7. `if (x%2==0&& x%5==0){`
8. `cout<<"The integer is even and divisible by 5";`
9. `}`
10. `else if (x%2==0){`
11. `cout<<"The integer is even but not divisible by 5";`
12. `}`
13. `else {`
14. `cout<<"The integer is divisible by 5 but is not even";`

```
15.    }  
16.}
```



A screenshot of a Windows command prompt window. The title bar reads "C:\Users\deff\OneDrive - National University of Sciences & Technology\Desktop\Untitled3.exe". The command prompt shows the following text: "Please integer value 100", "The integer is even and divisible by 5", a separator line of dashes, "Process exited after 4.664 seconds with return value 0", and "Press any key to continue . . .". The Windows taskbar is visible at the bottom, showing the search bar, task view, and various application icons. The system tray on the right shows the temperature as 22°C, the time as 7:29 PM, and the date as 10/12/2023.

Question 3:

```
1. #include <iostream>  
2. using namespace std;  
3. int main(){  
4.     int x;  
5.     cout<<"Please enter year";  
6.     cin>>x;  
7.     if (x%4==0){  
8.         cout<<"This year is a leap year";  
9.     }  
10.    else {  
11.        cout<<"This is not a leap year";  
12.    }  
13.}
```

```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\Untitled3.exe
Please enter year 2028
This year is a leap year
-----
Process exited after 9.025 seconds with return value 0
Press any key to continue . . .
```

Question 4:

```
1. #include <iostream>
2. using namespace std;
3. int main(){
4.     float x,A;
5.     cout<<"Please enter your GPA";
6.     cin>>x;
7.     cout<<"Please enter your attendance percentage";
8.     cin>>A;
9.     if (x>=3.5&&A>=80){
10.         cout<<"You are eligible for the scholarship";
11.     }
12.     else {
13.         cout<<"You are not eligible for the scholarship";
14.     }
15. }
```



```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\Untitled3.exe
Please enter your GPA 3.77
Please enter your attendance percentage 88.9
You are eligible for the scholarship
-----
Process exited after 11.45 seconds with return value 0
Press any key to continue . . .
```

Question 5:

1. `#include <iostream>`
2. `using namespace std;`
3. `int main(){`
4. `char alpha; //initialising`
5. `cout<<"please enter the alphabet"; // input from the user`
6. `cin>>alpha;`
7. `if`
 `(alpha=='a' || alpha=='e' || alpha=='i' || alpha=='o' || alpha=='u' || alpha=='`
 `A' || alpha=='E' || alpha=='I' || alpha=='O' || alpha=='U'){ // specifying`
 `conditions`
8. `cout<<"The alphabet is a vowel";`
9. `}`
10. `else {`
11. `cout<<"The alphabet is a consonant";`
12. `}`
13. `}`

```
C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\Untitled3.exe
please enter the alphabet G
The alphabet is a consonant
-----
Process exited after 2.994 seconds with return value 0
Press any key to continue . . .
```