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Roll no:

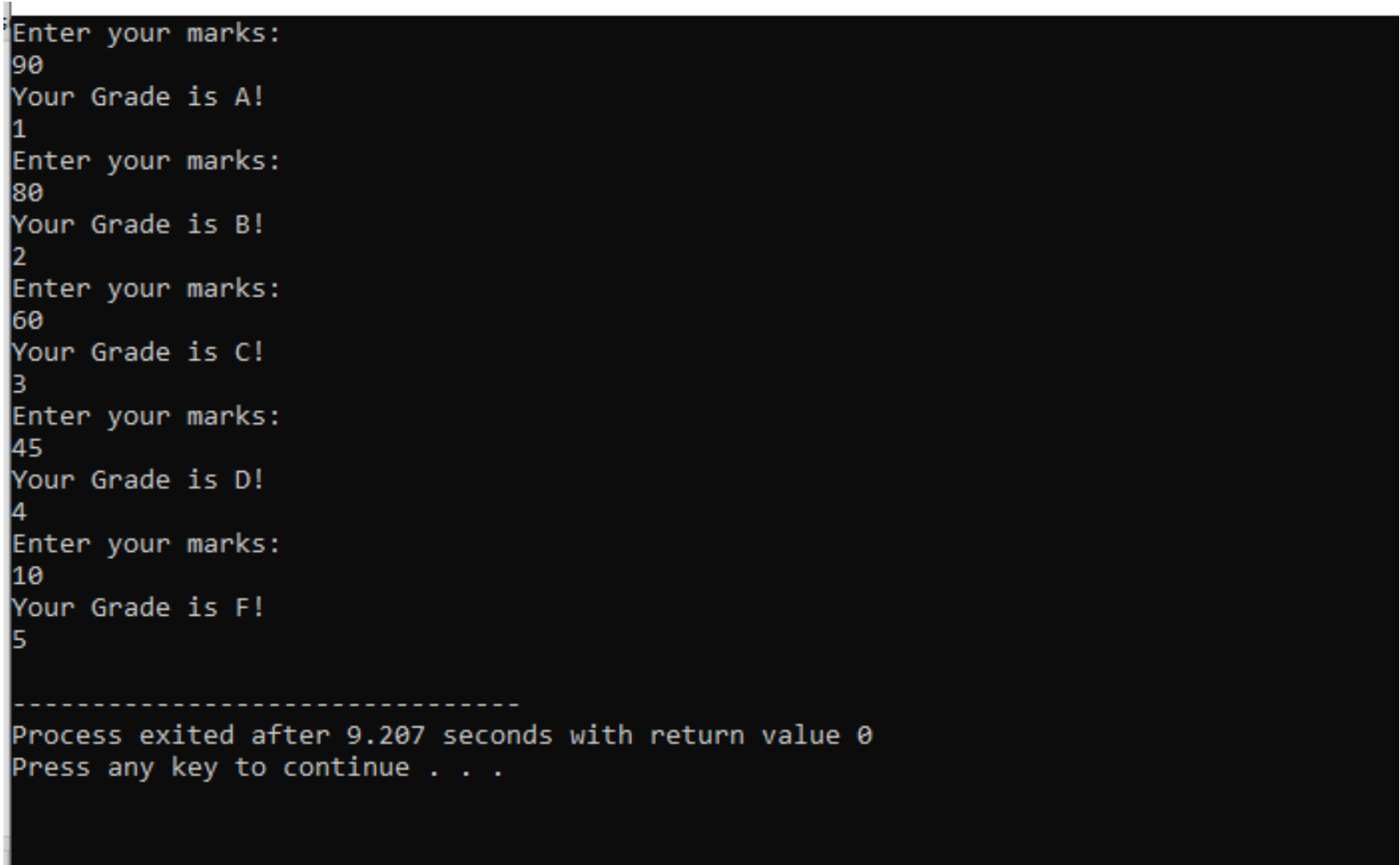460945

Fundamentals of Programming

Assignment no. 2

TASK 1

```cpp
#include <iostream>

using namespace std;

int main () {
//TASK 1
for (int i = 0; i < 5; ++i) {           //This is a loop that allows this program to run 5 times
 int Grade;

cout<<"Enter your marks:"<<endl;        // For taking input from user and assigning a variable
cin>>Grade;
if (Grade>=90 && Grade<=100) {          // A condition that checks if the marks fall into a certain grade
cout<<"Your Grade is A!"<<endl;
} else if (Grade>=75 && Grade<=90) {    // Another condition inside of if that can infinitely repeat itself for different conditions
cout<<"Your Grade is B!"<<endl;
} else if (Grade>=60 && Grade<=75) {    // This means that else if allows user to make more than 2 conditions within if and else
cout<<"Your Grade is C!"<<endl;
} else if (Grade>=45 && Grade<=60) {
cout<<"Your Grade is D!"<<endl;
} else {                                // Else only works if all other conditions are false
    cout<<"Your Grade is F!"<<endl;
}
cout << i + 1 << std::endl;

}
```

OUTPUT

```
Enter your marks:
90
Your Grade is A!
1
Enter your marks:
80
Your Grade is B!
2
Enter your marks:
60
Your Grade is C!
3
Enter your marks:
45
Your Grade is D!
4
Enter your marks:
10
Your Grade is F!
5

--------------------------------
Process exited after 9.207 seconds with return value 0
Press any key to continue . . .
```

TASK 2

```
28   //TASK 2
29
30   int Num;
31   cout<<"Enter your integer:"<<endl;
32   cin>>Num;
33   if (Num % 2 == 0 && Num % 5 == 0) {          //This condition checks if the number is even and divisible by 5
34       cout<<"Number is both even and divisible by 5."<<endl;
35   }   else if (Num % 2!=0 && Num % 5 ==0) {     //This condition cheks if the number is even or not but is divisible by 5
36       cout<<"Number is not even but is divisible by 5."<<endl;
37   }   else if (Num % 2 ==0 && Num % 5!=0) {     //This condition checks if the number is divisible by 5 but is even
38       cout<<"Number is even but not divisible by 5."<<endl;
39   } else {                                       //This condition shows output that the number is neither even nor divisible by 5
40       cout<<"Number is neither even nor disible by 5."<<endl;
41   }
42
```

OUTPUT

```
Enter your integer:
10
Number is both even and divisible by 5.

---------------------------------
Process exited after 0.8128 seconds with return value 0
Press any key to continue . . .
```

```
Enter your integer:
6
Number is even but not divisible by 5.

---------------------------------
Process exited after 0.5081 seconds with return value 0
Press any key to continue . . .
```

```
Enter your integer:
11
Number is neither even nor disible by 5.

---------------------------------
Process exited after 2.108 seconds with return value 0
Press any key to continue . . .
```

TASK 3

```cpp
//TASK 3

int Year;
cout<<"Enter your year"<<endl;
cin>>Year;
if ((Year%4==0 && Year%100!=0)||(Year%400==0)) {
    cout<<"Yes it is a leap year."<<endl;
} else {
    cout<<"It isnt a leap year."<<endl;
}
```

OUTPUT

```
Enter your year
2000
Yes it is a leap year.

-------------------------------
Process exited after 3.819 seconds with return value 0
Press any key to continue . . .
```

```
Enter your year
1990
It isnt a leap year.

-------------------------------
Process exited after 2.939 seconds with return value 0
Press any key to continue . . .
```

TASK 4

```cpp
//TASK 4

double Attendance,GPA;
cout<<"Enter your Attendance percentage:"<<endl;
cin>>Attendance;
cout<<"Enter your GPA:"<<endl;
cin>>GPA;

if (Attendance>=80.0 && GPA>=3.5) {
    cout<<"You are eligible for scholarship."<<endl;
} else {
    cout<<"You are not eligible for scholarship"<<endl;
}
```

OUPUT

```
Enter your Attendance percentage:
80
Enter your GPA:
3.5
You are eligible for scholarship.

-------------------------------
Process exited after 4.699 seconds with return value 0
Press any key to continue . . .
```

```
Enter your Attendance percentage:
80
Enter your GPA:
3.4
You are not eligible for scholarship

-------------------------------
Process exited after 2.588 seconds with return value 0
Press any key to continue . . .
```

TASK 5

```cpp
//TASK 5

char Alphabet;
cout<<"Enter a letter:"<<endl;
cin>>Alphabet;
if (Alphabet=='a'||Alphabet=='e'||Alphabet=='i'||Alphabet=='o'||Alphabet=='u') {
    cout<<"Letter is a vowel."<<endl;

} else {
    cout<<"Letter is a consonant."<<endl;
}

return 0;
}
```

OUTPUT

```
Enter a letter:
a
Letter is a vowel.

--------------------------------
Process exited after 1.229 seconds with return value 0
Press any key to continue . . .
```

```
Enter a letter:
b
Letter is a consonant.

--------------------------------
Process exited after 1.22 seconds with return value 0
Press any key to continue . . .
```

THE END