CS-114 - Fundamental of Programing

Lab Manual # 02

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```cpp
#include<iostream>

using namespace std;


int main() {

        cout<<"HOME TASK 1"<<endl;

        int marks;

        cout<<"Enter Marks:";

        cin>>marks;

        if(marks<=100&&marks>=90)

        //if marks are in the range [90,100] then grade is A

        {

                cout<<"Your grade is A"<<endl;

        }

        else if(marks<90&&marks>=75)

        //if marks are in the range [75,89] then grade is B

        {

                cout<<"Your grade is B"<<endl;

        }

        else if(marks<75&&marks>=60)

        //if marks are in the range [60,74] then grade is C

        {

                cout<<"Your grade is C"<<endl;

        }

        else if(marks<60&&marks>=45)

        //if marks are in the range [45,59] then grade is D

        {

                cout<<"Your grade is D"<<endl;

        }

        else

        //if marks are in the range [0,44] then grade is F

        {

                cout<<"Your grade is F"<<endl;

        }

        return 0;

}
```

HOME TASK 1

```cpp
#include<iostream>

using namespace std;


int main() {
        cout<<"HOME TASK 2"<<endl;
        int x,result1,result2;
        cout<<"Enter a number:";
        cin>>x;
        result1=x % 2;
        //taking remiander of number entered divided by 2
        //if number is even then result1 should be 0
        result2=x % 5;
        //taking remainder of number entered divided by 5
        //if number is divisible by 5 then result2 should be 0
        if(result1==0&&result2==0)
        {
                cout<<"The number is even and divisible by 5"<<endl;
        }
        else if(result1==0&&result2!=0)
        {
                cout<<"The number is even but not divisible by 5"<<endl;
        }
        else if(result1!=0&&result2==0)
        {
                cout<<"The number is not even but divisible by 5"<<endl;
        }
        else
        {
                cout<<"The number is neither even nor divisible by 5"<<endl;
        }
        return 0;
}
```

HOME TASK 2

```cpp
#include<iostream>

using namespace std;


int main() {

        cout<<"HOME TASK 3"<<endl;

        int year,result;

        cout<<"Enter year:";

        cin>>year;

        result=year % 4;

        //taking remained of year entered divider by 4

        //as leap year comes every 4 years,the result should be 0 if the year entered is a leap year

        if(result==0)

        {

                cout<<"It is a leap year"<<endl;

        }

        else

        {

                cout<<"It is not a leap year"<<endl;

        }

        return 0;

}
```

```cpp
#include<iostream>

using namespace std;


int main() {

        cout<<"HOME TASK 4"<<endl;

        float gpa,attendance;

        cout<<"Enter student's GPA:";

        cin>>gpa;

        cout<<"Enter student's attendance:";

        cin>>attendance;

        if(gpa>=3.5&&attendance>=80)

        {

                cout<<"Student is elegible for scholarship"<<endl;

        }

        else

        {

                cout<<"Student is not elegible for scholarship"<<endl;

        }

        return 0;

}
```

HOME TASK 4

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

```cpp
int main() {
        cout<<"HOME TASK 5"<<endl;
        char letter,a,e,i,o,u;
        cout<<"Enter a letter:";
        cin>>letter;
        if(letter=='a'||letter=='e'||letter=='i'||letter=='o'||letter=='u')
        //if letter entered is a vowel(a,e,i,o,u) then condition will be true
        {
                cout<<"Letter is a vowel"<<endl;
        }
        //if letter entered is a letter other than the vowels(a,e,i,o,u) then condition will be false
        else
        {
                cout<<"Letter is a consonant"<<endl;
        }
        return 0;
}
```