

Write a C++ program to read a number, and print the day of the week:

```
#include<iostream.h>
```

```
void main( )
{
    int day;
    cin >> day;
    if ( day == 1 ) cout << "Sunday";
    else if (day == 2) cout << "Monday";
    else if (day == 3) cout << "Tuesday";
    else if (day == 4) cout << "Wednesday";
    else if (day == 5) cout << "Thursday";
    else if (day == 6) cout << "Friday";
    else if (day == 7) cout << "Saturday";
    else cout << "Invalid day number";
}
```

Write C++ program to compute the value of Z according to the following equations:

$$Z = \begin{cases} x + 5 & : x < 0 \\ \cos(x) + 4 & : x = 0 \\ \sqrt{x} & : x > 0 \end{cases}$$

5- Nested If Statements:

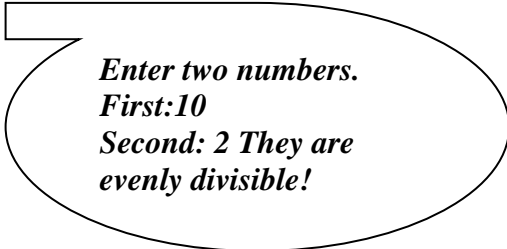
Some of the samples of **NESTED if-else** constructions are shown below:

<pre>If (exp.) { Statements } Else { Statements }</pre>	<pre>If (exp.) { If (exp.) {Statements} Else { Statements} } Else {Statements}</pre>	<pre>If (exp.) { If (exp.) {Statements} Else { Statements} } Else {If (exp) {Statements} Else {Statement} }</pre>
--	--	---

```
if (expression1)
{ if (expression2)
  Statment1;
else
  { if (expression3)
    Statment2;
  else
    Statment3;
}
}
else
  Statment4;
```

Write C++ program to insert two numbers and find the possibility of dividing the first number by the second.

```
#include<iostream.h>
void main()
{
int firstNumber, secondNumber;
cout<<"Enter two numbers.\nFirst:";
cin>>firstNumber;
cout<<"\nSecond:";
cin>>secondNumber;
cout<<"\n\n";
if (firstNumber >= secondNumber)
{
if((firstNumber%secondNumber)==0) //evenly divisible?
{
if(firstNumber==secondNumber)
cout<<"They are the same!\n";
else
cout<<"They are evenly divisible!\n";
}
}
```



*Enter two numbers.
First:10
Second: 2 They are
evenly divisible!*

```
else
cout<<"They are not evenly divisible!\n";
}
else
cout<<"Hey!The second one is larger!\n";
}
```

1- *The switch case statement*

The switch statement is a special multi way decision maker that tests whether an expression matches one of the number of constant values, and braces accordingly.

General form of switch selection statement

```
switch (variable){
case valueOne: statement; break;
case valueTwo: statement; break;
....
case valueN: statement; break;
default: statement;
}
```

Example:

```
switch (value)
{
case 0: cout << "grade is A";
break;
case 1: cout << "grade is B";
break;
case 2: cout << "grade is C";
break;
default: cout << "grade is X";
break;
}
```

Example:1

Write C++ program to read integer number, and print the name of the day in a week:

```
#include<iostream.h> void
main( )
{
Int day;
    cout << "Enter the number of the day \n"; cin >>
    day;

    >> day;
    switch (day)
    {
    case 1: cout << "Sunday";    break;
    case 2: cout << "Monday";   break;
    case 3: cout << "Tuesday";  break;
    case 4: cout << "Wednesday "; break;
    case 5: cout << "Thursday";  break;
    case 6: cout << "Friday";    break;
    case 7: cout << "Saturday";  break;
            cout << "Invalid day number";
    default: break;
    }
}
```

Example:2-1

Write C++ program to read two integer numbers, and read the operation to perform on these numbers:

Note : (used in if Else)

```
#include<iostream>
void main()
{
int num1 num2;
float Result;
char ch;
cout<<" enter two numbers\n";
cin>> num1>> num2;
cout<<" enter one of operators + - * / \n ";
cin>>ch;
if (ch = ' + ')
Result = num1 + num2 ;
else
if (ch = ' - ')
Result = num1 - num2 ;
else
if (ch = ' * ')
Result = num1 * num2 ;
else
Result = num1 / num2 ;
cout<< result;
}
```

Example:2-2

Write C++ program to read two integer numbers, and read the operation to perform on these numbers:

Note : (used in Switch case)

```
#include<iostream>
Void main()
{
int num1 num2 ;
char ch ;
float Result;
cout<< "enter two numbers\n ";
cin>>num1 >> num2;
cout<< "enter one of operators + - * , /\n" ;
cin>>ch ;
switch ( ch ) {
case '+ ': result = num1 + num2; break;
case '- ': result = num1 - num2; break;
case '* ': result = num1 * num2; break;
case '/ ': result = num1 / num2; break;
default : cout<<"not correct character\n";
}
cout<< result ;
}
```

