Switch Statement

Switch case statements are a substitute for long if statements that compare a variable to multiple values. After a match is found, it executes the corresponding code of that value case.

Syntax:

```
switch (n)
{
    case 1:     // code to be executed if n == 1;
        break;

    case 2:     // code to be executed if n == 2;
        break;

    default:  // code to be executed if n doesn't match any of the above cases
}
```

- The variable in switch should have a constant value.
- The break statement is optional. It terminates the switch statement and moves control to the next line after switch.
- If break statement is not added, switch will not get terminated and it will continue onto the next line after switch.
- Every case value should be unique.
- Default case is optional. But it is important as it is executed when no case value could be matched.

Examples

Ques1. Write a program to write a simple calculator.

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

int main() {

    int n1,n2;
    char op;

    cout<<"Enter 2 numbers: ";
    cin>>n1>>n2;

    cout<<"Enter operand: ";
    cin>>op;

    switch (op)
    {

    case '+':
        cout<<n1+n2<<endl;
        break;
    case '-':
        cout<<n1-n2<<endl;
        break;
    case '*':
        cout<<n1*n2<<endl;
        break;
    case '/':
        cout<<n1/n2<<endl;
        break;
    case '%':
        cout<<n1%n2<<endl;
        break;

    default:
        cout<<"Operator not found!"<<endl;
        break;
    }


    return 0;
```

```cpp
}
```

Ques2. Write a program to find whether an alphabet is a vowel or a consonant.

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

int main() {

    char c;

    cout<<"Enter an alphabet: ";
    cin>>c;

    switch (c)
    {
    case 'a':
        cout<<"It is a vowel"<<endl;
        break;
    case 'e':
        cout<<"It is a vowel"<<endl;
        break;
    case 'i':
        cout<<"It is a vowel"<<endl;
        break;
    case 'o':
        cout<<"It is a vowel"<<endl;
        break;
    case 'u':
        cout<<"It is a vowel"<<endl;
        break;
    default:
        cout<<"It is a consonant"<<endl;
        break;
    }

    return 0;
}
```