Switch

- This is a multi-directional conditional control statement. Sometimes there is a need in program to choice among number of alternatives. For making this choice, we use switch statement.

- Case Statements are special type of <u>Conditional</u> Statements (Selection Control Mechanism) , Basically they are used as a alternative for the long if statements used to compare integral values , By integral values we mean the values that can be expressed as an integer eg :- Characters , Integers , <u>Numbers</u> etc.

```
switch(expression)
{
    case constant1:
        statement1;
    case constant2:
        statement2;
    case constant3:
        statement3;
    default:
        statement4;
}
```

Problem with switch

```
void main()
{
int i=2;
switch(i)
{
    case 1:
        printf("I am in case 1");
    case 2:
        printf("I am in case 2");
    case 3:
        printf("I am in case 3");
    case 4:
        printf("I am in case 4");
}
}
```
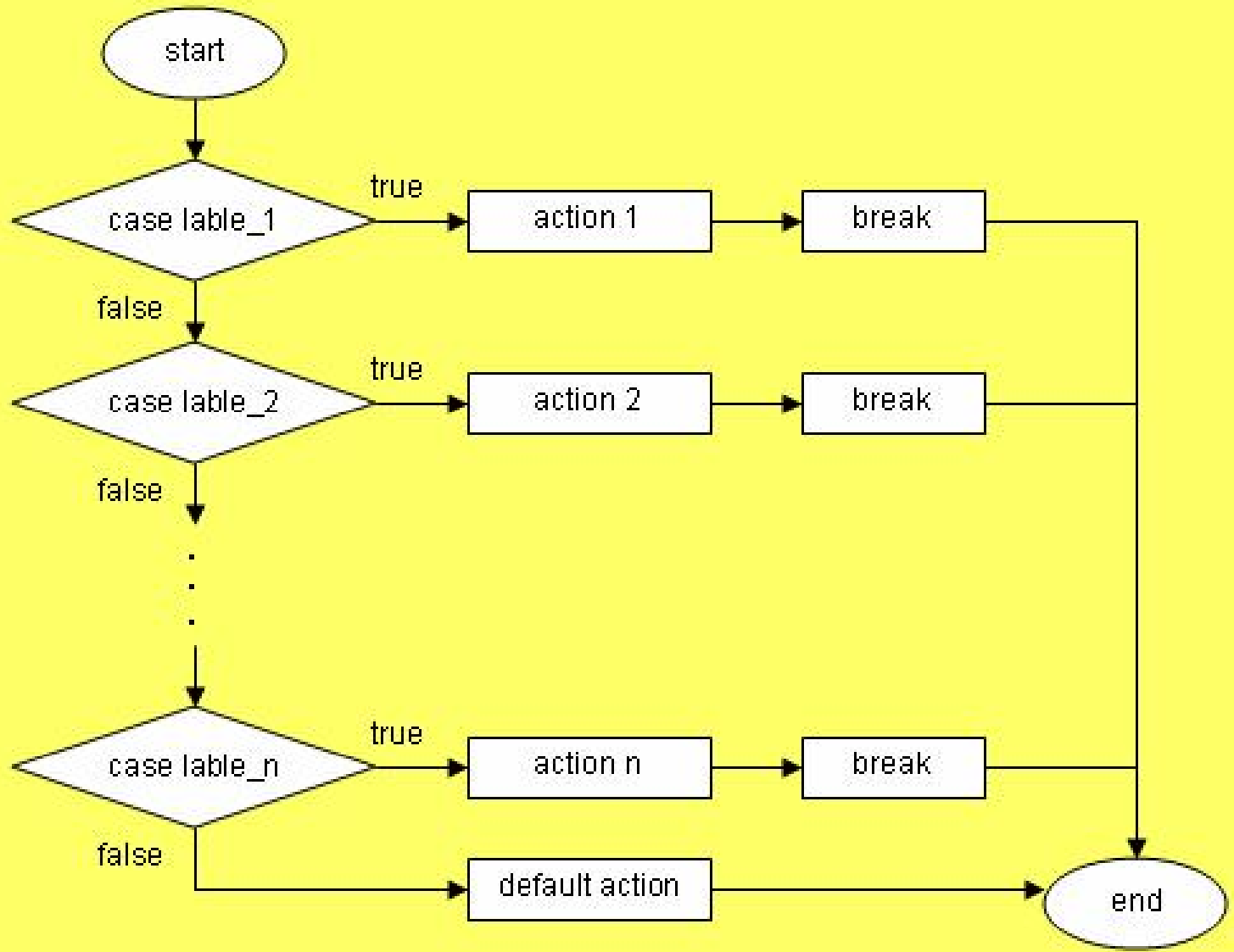
Output:
I am in case 2
I am in case 3
I am in case 4

Problem with switch and break

```
void main()
{
int i=2;
switch(i)
{
        case 1:
                printf("I am in case 1");
                break;
        case 2:
                printf("I am in case 2");
                break;
        case 3:
                printf("I am in case 3");
                break;
        case 4:
                printf("I am in case 4");
                break;
}
}
```

Output:
I am in case 2

Program to understand switch

```c
#include<stdio.h>
#include<conio.h>
void main()
{
int choice;
scanf("%d",&choice);
switch(choice)
{
    case 1:
    printf("first");
    break;
    case 2:
    printf("second");
    break;
    case 3:
    printf("third");
    break;
    default:
    printf("wrong choice");
}
getch();
}
```

1. WAP to find whether the alphabet is vowel or consonant.
2. WAP to print number of days in a month using switch statement.

WAP to print sum of following series

$$\cos(x) = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \ldots$$

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \ldots$$