C# Switch Statements

- Use the switch statement to select one of many code blocks to be executed.

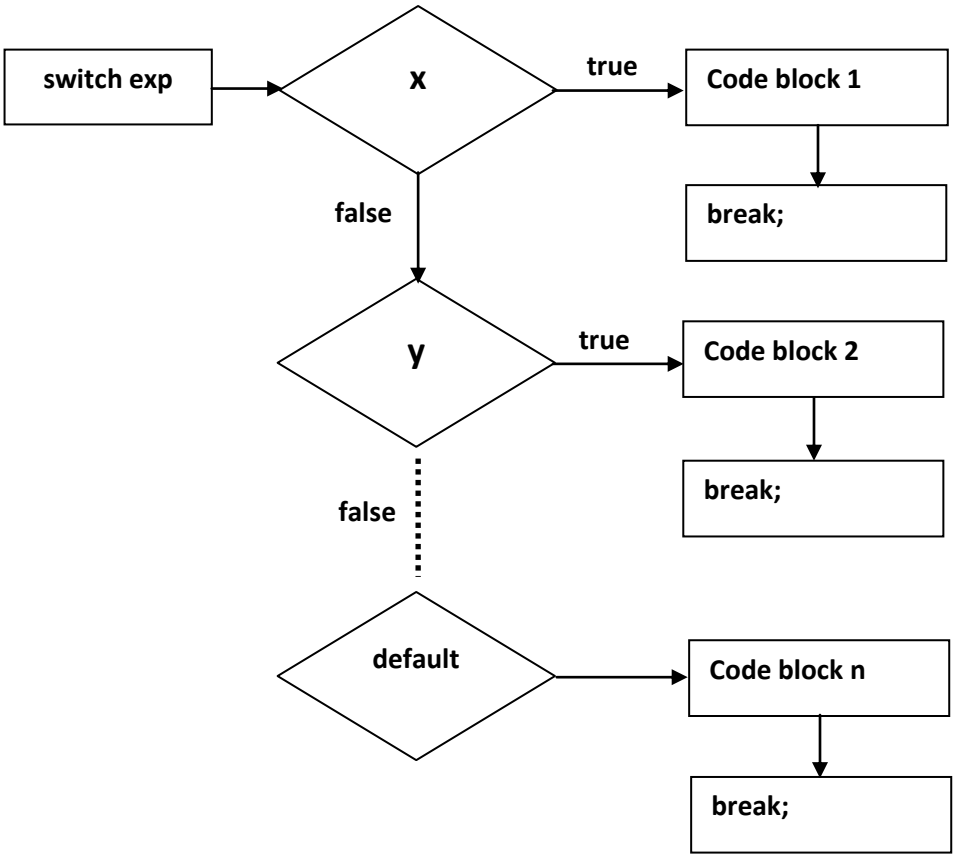
Syntax

```
switch(expression)
{
  case x:
    // code block 1
    break;
  case y:
    // code block 2
    break;
  default:
    // code block 3
    break;
}
```

This is how it works:

- The switch expression is evaluated once
- The value of the expression is compared with the values of each case
- If there is a match, the associated block of code is executed

- The break and default keywords will be described later.



The example below uses the weekday number to calculate the weekday name:

Example

```
int day = 4;
switch (day)

{
  case 1:
    Console.WriteLine("Monday");
    break;
  case 2:
    Console.WriteLine("Tuesday");
```

```
      break;
    case 3:
      Console.WriteLine("Wednesday");
      break;
    case 4:
      Console.WriteLine("Thursday");
      break;
    case 5:
      Console.WriteLine("Friday");
      break;
    case 6:
      Console.WriteLine("Saturday");
      break;
    case 7:
      Console.WriteLine("Sunday");
      break;
}// Outputs "Thursday" (day 4)
```

The break Keyword

- When C# reaches a **`break`** keyword, it breaks out of the switch block.
- This will stop the execution of more code and case testing inside the block.
- When a match is found, and the job is done, it's time for a break. There is no need for more testing.

- A break can save a lot of execution time because it "ignores" the execution of all the rest of the code in the switch block.

The default Keyword

- The default keyword is optional and specifies some code to run if there is no case match:

Example

```
int day = 4;
switch (day)
{
  case 6:
    Console.WriteLine("Today is Saturday.");
    break;
  case 7:
    Console.WriteLine("Today is Sunday.");
    break;
  default:
    Console.WriteLine("Looking forward to the
Weekend.");
    break;
}// Outputs "Looking forward to the Weekend."
-------------------------------------
```

Homework:

1. Write a C# program to enter an integer number from the keyboard and check if the first digit is divisible by 3.
2. Write a C# program to enter a float number **`x`** and check whether **`x`** is odd or even **without** using the mod operator (%).
3. Write a C# to check whether a character is Uppercase or Lowercase. (**Hint:** To read a character from the keyboard use:

```
char ch;

ch = Convert.ToChar(Console.ReadLine());
```

4. Write a C# to enter a character from the keyboard and check whether the character is a digit or not.
5. Write a C# program to enter a character from the keyboard and check whether the character is alphabet or not.
6. Write a C# program to enter month number and print the month name.

   Example:

   input

   input character: 'd'

   output

   'd' is alphabet

Example:

input

input character: '#'

output

'#' is not alphabet

مثال برمجي عندما يقوم المستخدم باختيار رقم يقوم البرنامج بإظهار اليوم المقابل له في الأسبوع

مثال بالدالة IF:

```
short day;
Console.WriteLine(" Choose a Number");
day = short.Parse((Console.ReadLine()));

if (day == 1) Console.WriteLine("{0} day is Saturday ",day);

else if (day == 2) Console.WriteLine("{0} day is Sunday ",day);

else if (day == 3) Console.WriteLine("{0} day is Monday ",day);

else if (day == 4) Console.WriteLine("{0} day is Tuesday ",day);

else if (day == 5) Console.WriteLine("{0} day is Wednesday ",day);

else if (day == 6) Console.WriteLine("{0} day is Thursday ",day);

else if (day == 7) Console.WriteLine("{0} day is Friday ",day);

else Console.WriteLine("{0} is not a Valid Day ", day);
Console.ReadLine();
```

نفس المثال بالدالة Switch :

```
short day;
Console.WriteLine(" Choose a Number");
day = short.Parse((Console.ReadLine()));
switch (day)
{
   case 1: Console.WriteLine("{0} day is Saturday ", day);
      break;
   case 2: Console.WriteLine("{0} day is Sunday ",day);
      break;
   case 3: Console.WriteLine("{0} day is Monday ",day);
      break;
   case 4: Console.WriteLine("{0} day is Tuesday ",day);
      break;
   case 5: Console.WriteLine("{0} day is Wednesday ",day);
      break;
   case 6: Console.WriteLine("{0} day is Thursday ",day);
      break;
   case 7: Console.WriteLine("{0} day is Friday ",day);
      break;
   default: Console.WriteLine("{0} is not a Valid Day ", day);
      break;
}
```

مثال آخر بالدالة Switch:

```
using System;
using System.Collections.Generic;
using System.Text;

namespace ConsoleApplication1
```

```
{
   class Program
   {
      static void Main(string[] args)
      {
         string name;
         Console.WriteLine("Enter Your Name :");
         name = Console.ReadLine();
         switch (name)
         {
            case "Ahmed" : Console.WriteLine("Welcome Ahmed ") ;
               break;
            case "Ali" : Console.WriteLine("Welcome Ali");
               break;
            default: Console.WriteLine("I don't know who you are!! ") ;
               break;
         }
         Console.ReadLine();
      }
   }
}
```

في هذا البرنامج اذا تم ادخال الإسم Ahmed ستظهر لك رسالة **Welcome Ahmed**
و اذا تم ادخال الإسم Ali ستظهر لك رسالة **Welcome Ali**
اذا تم ادخال أي اسم آخر ستظهر لك هذه الرسالة **!!I don't know who you are**

ملاحظة: الحروف الكبيرة لا تساوي الصغيرة Ahmed لا يساوي ahmed .