C Switch

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Switch Statement

Instead of writing **many** `if..else` statements, you can use the `switch` statement.

The `switch` statement selects one of many code blocks to be executed:

Syntax

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

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` statement breaks out of the switch block and stops the execution
- The `default` statement is optional, and specifies some code to run if there is no case match

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

Example

```
int day = 4;

switch (day) {
  case 1:
    printf("Monday");
    break;
  case 2:
    printf("Tuesday");
    break;
  case 3:
    printf("Wednesday");
    break;
  case 4:
    printf("Thursday");
    break;
  case 5:
    printf("Friday");
    break;
  case 6:
    printf("Saturday");
    break;
  case 7:
    printf("Sunday");
    break;
}

// Outputs "Thursday" (day 4)
```

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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 specifies some code to run if there is no case match:

Example

```
int day = 4;

switch (day) {
  case 6:
    printf("Today is Saturday");
    break;
  case 7:
    printf("Today is Sunday");
    break;
  default:
    printf("Looking forward to the Weekend");
}

// Outputs "Looking forward to the Weekend"
```

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Note: The default keyword must be used as the last statement in the switch, and it does not need a break.

C Exercises

Test Yourself With Exercises

Exercise:

Insert the missing parts to complete the following switch statement:

```
int day = 2;
switch (    ) {
      1:
    printf("Monday");
          ;
      2:
    printf("Sunday");
          ;
}
```

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Start the Exercise

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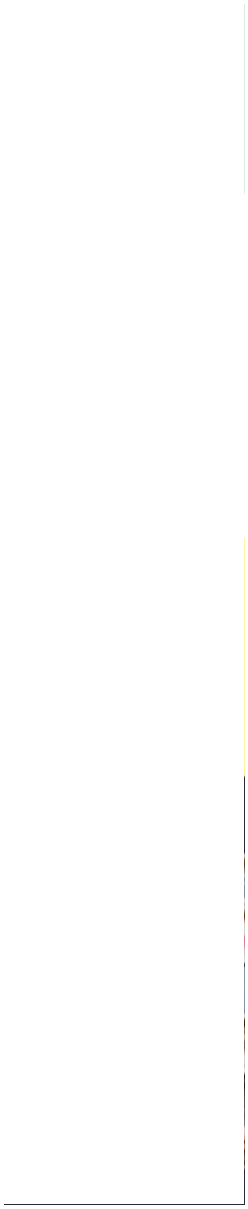
CODE GAME



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