MAKING DECISIONS

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AFTER THIS PRESENTATION

- You'll be able to make decisions using `if` statements

- You'll be able to make decisions using `switch` statements

WE WILL LOOK AT

`if`	`switch … case`
`if … else`	`default`
`if … else if …`	
`if … else if … else`	

MAKING DECISIONS

- `if` is used similar to regular English

- Lots of variations e.g.
  ```
  if
  if … else
  if … else if … else
  if … else if … else if … else
  ```

COMPARING THINGS

- < is less than

- <= is less than or equal to

- > is greater than

- >= is greater than or equal to

- == is equal to

- != is not equal to

EXAMPLE

```
<!doctype html>
<html>
  <head><script>
    var user_name;

    user_name=prompt("What is your name?");
    if (user_name == "dave")
      alert("Great name!");
  </script></head>
</html>
```

USING BRACES

- You must use braces { } for more than 1 line of code:

```
if (user_name == "dave" ) {
    alert("Great name!");
    awesome_name=true;
}
```

- Braces are optional if there is only one line of code

IF ... ELSE

- `else` goes at the end of the `if`

- It handles any situation not already handled at that point

```
<!doctype html>
<html>
  <head><script>
    var user_name;

    user_name=prompt("What is your name?");
    if (user_name == "dave")
      alert("Great name!");
    else
      alert("Your name isn't great...");
  </script></head>
</html>
```

IF ... ELSE IF

- Use `else if` to add another test

- You can do this as many times as you like

```
<!doctype html>
<html>
  <head><script>
    var user_name;

    user_name=prompt("What is your name?");
    if (user_name == "dave")
      alert("Great name!");
    else if (user_name == "jogesh")
      alert("Pretty good name!");
  </script></head>
</html>
```

IF ... ELSE IF ... ELSE

- Here's an example of everything working together

```
<!doctype html>
<html><head><script>
  var user_name;

  user_name=prompt("What is your name?");
  if (user_name == "dave")
    alert("Great name!");
  else if (user_name == "jogesh")
    alert("Pretty good name!");
  else if (user_name == "oz")
    alert("Excellent name!");
  else
    alert("Your name isn't great, never mind...");
</script></head></html>
```

SWITCH

- Used for a series of comparisons:

```
switch(variable_name) {
    case "option_1": do_something_1();
                     break;


            . . .   :   . . .


    case "option_n": do_something_n();
                     break;


        default:  do_something_default();
}
```

```html
<!doctype html>
<html>
    <head>
        <script>
        var user_name=prompt("What is your name?");

        switch(user_name) {
            case "dave":
                alert("Great name!");
                break;
            case "jogesh":
                alert("Pretty good name!");
                break;
            default:
                alert("Your name isn't great, never mind...");
        }
        </script>
    </head>
</html>
```

SWITCH

- `break` is used to stop any more `case` comparisons

- Sometimes `break` is appropriate, sometimes it isn't

```html
<!doctype html>
<html>
    <head>
        <script>
        var user_name=prompt("What country would you like to visit?");
        switch(user_name) {
            case "Canada":
            case "France":
                alert("Take me also!");
                break;
            case "Japan":
            case "Philippines":
                alert("Great! Have fun!");
                break;
            case "North Korea":
                alert("Oh! Good luck!");
                break;
            default:
                alert("I am sure you will have a great time");
        }
        </script>
    </head>
</html>
```

WHILE LOOPS

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AFTER THIS PRESENTATION

- You'll be able to create `while` loops

- You'll be able to create do ... `while` loops

WE WILL LOOK AT

while

---

do … while

LOOPS

- A loop repeats some code again and again

- Here we will look at:

    - `while`

    - `do ... while`

WHILE LOOPS

- A while loop is the simplest loop

```
while (condition) {
```

   ... *code goes here* ...

```
};
```

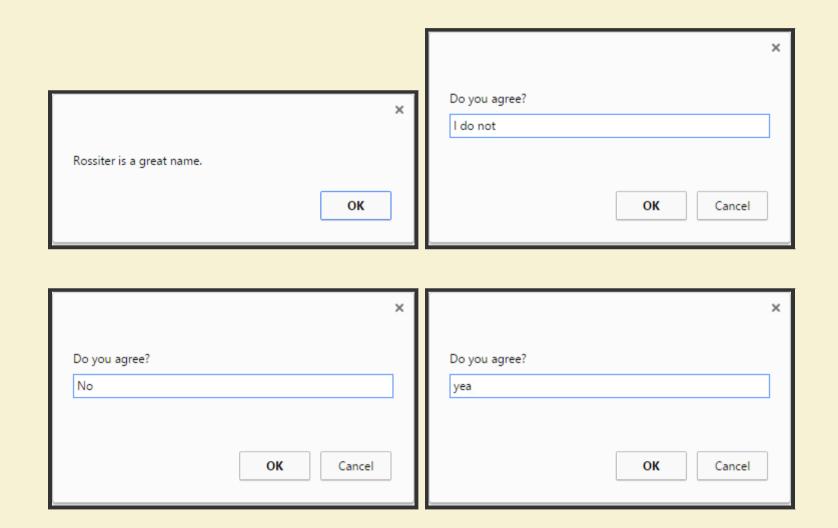- Each time the loop content is executed we call it an *iteration*

INDEXOF()

- *string*`.indexOf("text")`
  gives you the location of the first "text" in the string

- For example:

```
var text = "The cat's hat was wet";
result = text.indexOf("at");
```

- *result* will be 5 　从0开始计算

```
<!doctype html>
<html><head>
    <title>Example of while()</title>
    <script>
        var response, finished;
        finished=false;
        alert("Rossiter is a great name.");
        while (!finished){
            response=prompt("Do you agree?");
            if (response.indexOf("y")==0)
                finished=true;
        }
    </script>
</head></html>
```

Rossiter is a great name.

OK

Do you agree?

I do not

OK   Cancel

Do you agree?

No

OK   Cancel

Do you agree?

yea

OK   Cancel

DO ... WHILE LOOPS

- do ... while is an 'upside-down' version of while

```
do {
```

    . . . code goes here . . .

```
} while (condition);
```

- A do ... while loop will be executed at least once

```
<!doctype html>
<html><head>
    <title>Example of do .. while()</title>
    <script>
        var response, finished;
        finished=false;
        alert("Rossiter is a great name.");
        do {
            response=prompt("Do you agree?");
            if (response.indexOf("y")==0)
                finished=true;
        } while (!finished);

    </script>
</head></html>
```