Looping

Three Doors Game - The Monty Hall Problem

Video

Is there any advantage or disadvantage to switching?

Find the Disney Star in this video?

- Green ticket to the first with the right answer…
- Make sure you use BQ in the subject
- Video
- Movie clip from ‘21’

Looping Statements: Doing something more than once

- While loop
- Do-While loop
- For loop

While loop syntax

```
while (<Boolean expression>)
{
    <statements>
}
```

While Loop Example

```
int count = 0;
const int max = 5;
int sum = 0;

while (count < max)
{
    sum = sum + count;
    count = count + 1;
}
labelAnswer.Text = Convert.ToString(sum);
```

Do-While loop syntax:

```
do
{
        <statements>
} while (<Boolean expression>);
```

Do-While Loop Example

```
int count = 0;
const int max = 5;
int sum = 0;

do
{
    sum = sum + count;
    count = count + 1;
} while (count < max);
labelAnswer.Text = Convert.ToString(sum);
```

For loop syntax:

```
for (<initialization statement>;
    <Boolean expression>;
    <iterator statement>)
{
       <statements>
}
```

For Loop Example

```
const int max = 5;
int sum = 0;

for (int count = 0; count < max; count++)
{
    sum = sum + count;
}
labelAnswer.Text = Convert.ToString(sum);
```

More Examples

```
int count = 1;
const int max = 100;
int sum = 0;

while (sum < max)
{
    sum = sum + count;
    count = count + 1;
}
labelAnswer.Text = Convert.ToString(count);
```

More Examples

```
Random random = new Random();
int count = 0;
int diceValue1;
int diceValue2;
do
{
    diceValue1 = random.Next(1, 7);
    diceValue2 = random.Next(1, 7);
    count = count + 1;
} while (diceValue1 != diceValue2);
labelAnswer.Text = Convert.ToString(count);
```

But Wait! There’s More!!!

- break;
- continue;

Break Statement: How to get out early

- Break syntax:

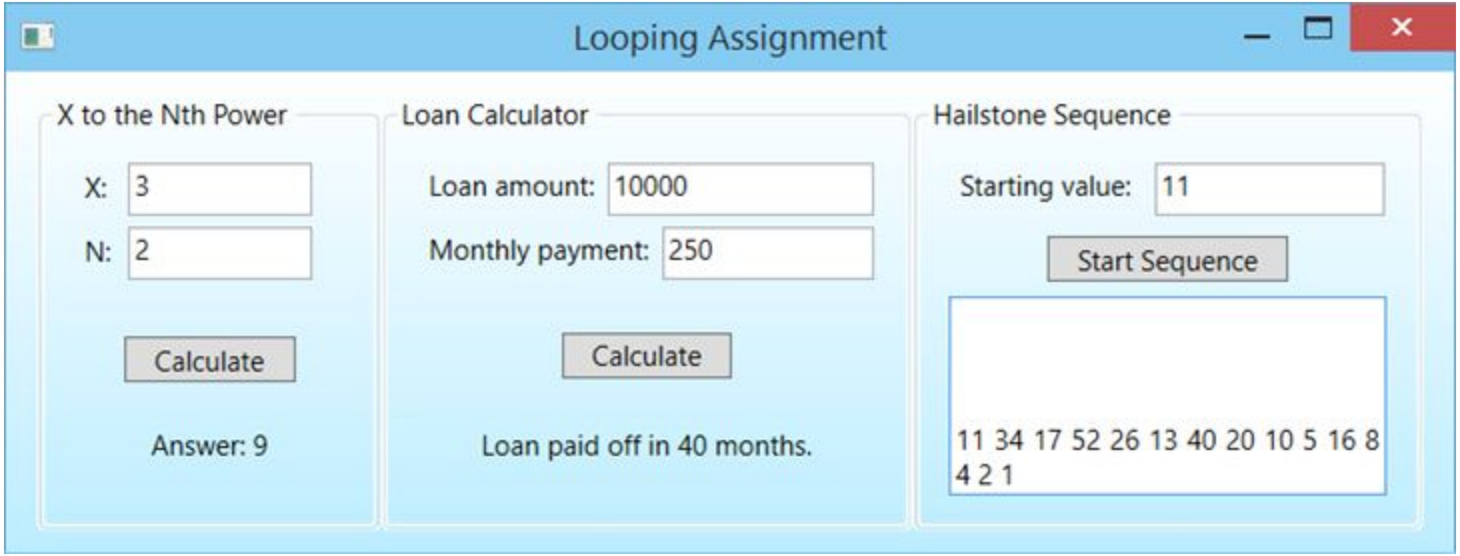
```
break;
```

Continue Statement: How to skip this one

- Continue syntax:

```
continue;
```

Looping Assignment



Answer: 9

Loan amount: 10000

Monthly payment: 250

Loan paid off in 40 months.

Starting value: 11

11 34 17 52 26 13 40 20 10 5 16 8
4 2 1