Learn to program on phone with Pocket Code

Lesson 7: Angle Identifier
About CEL

Code to Enhance Learning is nonprofit uses coding as a tool to build critical thinking, creativity, collaboration and perseverance in children in grade 5-9.
Lesson 7
Angle Identifier
Objective:

We will make an application “Angle Identifier”.

Let’s look at the project.
Let’s Recall:

1. What is Sequence?
   A logical Order

2. What is Events?
   An event in an action due to which something happens.

3. What is Loop?
   Repeats a sequence of instructions

4. What is Nested Loop?
   Loop within a Loop.
Let’s Recall:

5. What is Conditionals?
   Conditionals are expressions that evaluate to either true or false.

6. What is Parallelism?
   The ability of the brain to do many things (aka, processes) at once

7. What is Broadcasting?
   Instructions are transmitted from a sprite or backdrop to cause other things to happen.
Operator:

Operators are a part of an expression and allows us to operate on values i.e. operands. The expression returns a value.

For example,

$3 + 5 = 8$

There are 4 types of operators in our scope,

1. Logic
2. Comparative
3. Arithmetic
4. String
Logic Operator

**And** is a Logic Operator which operates on expression and tells us (gives output as True) when both the expressions are True.

For example-

I like Mango **And** My favorite color is pink.

The output will be, True

**Or** is also a Logic Operator which operates on expression and tells us (gives output as True) when any one of the expression is True.

For example-

I have one sibling **Or** I have 4 family members

The output will be, True

**Not** is also a Logic Operator which operates on expression and tells us (gives output as) True when the expression is incorrect.

For example-

**Not** My roll number is 15

The output will be, True

The underlined sentences are called Operands.
Comparative Operator

Greater than (>): A comparative operator which compares operands and tells us (gives output) as True when operand 1 is greater than operand 2.

Lesser than (<): A comparative operator which compares operands and tells us (gives output) as True when operand 1 is lesser than operand 2.

Equal to (=): A comparative operator which compares operands and tells us (gives output) as True when operand 1 is equal to operand 2.

For example -
(Operand 1) Sides of square are greater than (>),
3 (Operand 2).

The output will be, True

For example -
Number of my sibling is lesser than (<) 5

The output will be, False

For example -
My roll number is equal to (=) 1.

The output will be, True.

The underlined sentences are called Operands.
Angle Identifier: (Teacher Models)

Let’s do abstraction (i.e. to identify important details) to make understand project and make it simple

1) What will happen on the stage?
   - Sprite will ask us about what angle we want to know about.
   - Then according to the value of angle we will see the backdrop.

2) What sprite and backdrop will be needed on the stage?
Angle Identifier: (Teacher Models)

Let’s make the project and write codes for the sprites…

Sprite

Codes/Programs

When scene starts

Place at
x: -57  y: -607

Set background
Home

When stage is tapped

Set background
Home

Say 'I can help you identify type of an

Say 'It's an acute angle'

If "ans" > 0 and "ans" < 9... is true then

Set background
Acute Angle

Say 'Please enter the degree of an angle'

Ask 'Please enter the degree of the angle and store written answer in ans'

End if
Angle Identifier: (Teacher Models)

Let’s make the project and write codes for the sprites...

Sprite

Codes/Programs

If "ans" = 90 is true then
Set background Right Angle
Say ‘It’s a right angle’
End if
If "ans" > 90 and "ans" <... is true then
Set background Obtuse Angle
Say ‘It’s an obtuse angle’
End if
Quiz:

1. What are Operators?
Quiz:

2. Which Code Block will help us to find an acute angle?

A) If "ans" > 0 and "ans" < 9... is true then
   Set background
   Acute Angle
   Say 'It's an acute angle'
   End if

B) If "ans" > 90 and "ans" <... is true then
   Set background
   Obtuse Angle
   Say 'It's an obtuse angle'
   End if
Closing:

• What did we do today?
• What is one thing that you liked in the class the most?
• What did you learn?
Code To Enhance Learning

Website: www.codetoenhancelearning.org