



SESSION - 7

FOR LOOP



Learning Outcomes:

- **Remember:** The students will list different types of blocks being learnt in the session .
- **Understand:** - They will focus on understanding the use and application of FOR Loop.
- **Apply:** They will apply FOR Loop to work on different programs.
- **Analyze:** They will check their understanding by developing a code.
- **Create:** They will create the code in EduBlocks.

FOR LOOP

- A for loop is used for iterating over a sequence (that is either a list, a tuple, a dictionary, a set, or a string).
- This is less like the for keyword in other programming languages, and works more like an iterator method as found in other object-orientated programming languages.
- With the for loop we can execute a set of statements, once for each item in a list, tuple, set etc.
- **Example:-**

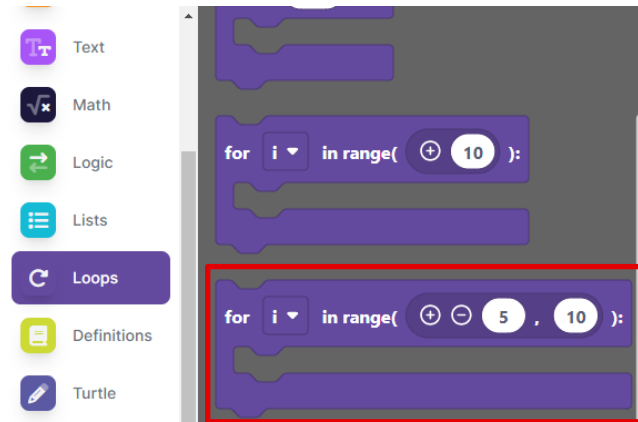
```
for x in range(6):
    print(x)
```

Apply & Create

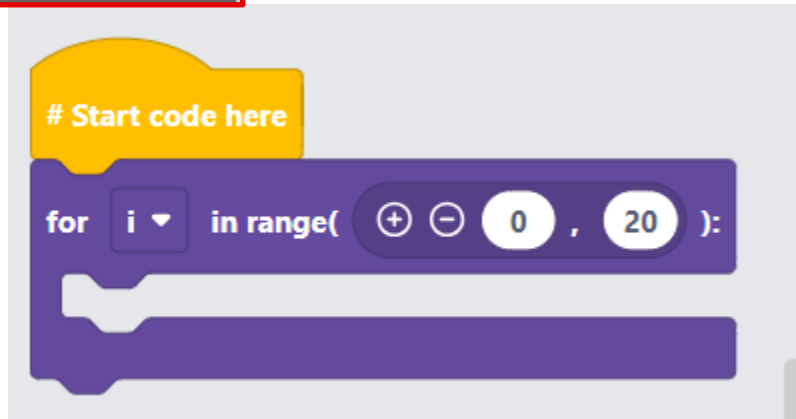
TASK 01:-

**</> WRITE A PROGRAM TO PRINT THE HELLO
WORLD 20 TIMES USING FOR LOOP**

Program Step 1:-



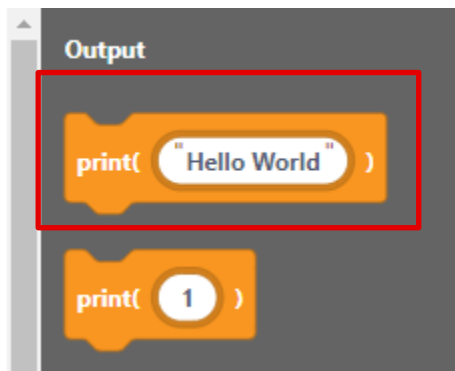
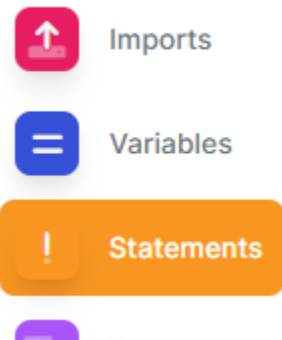
Get a For Loop and set the range to 0,20



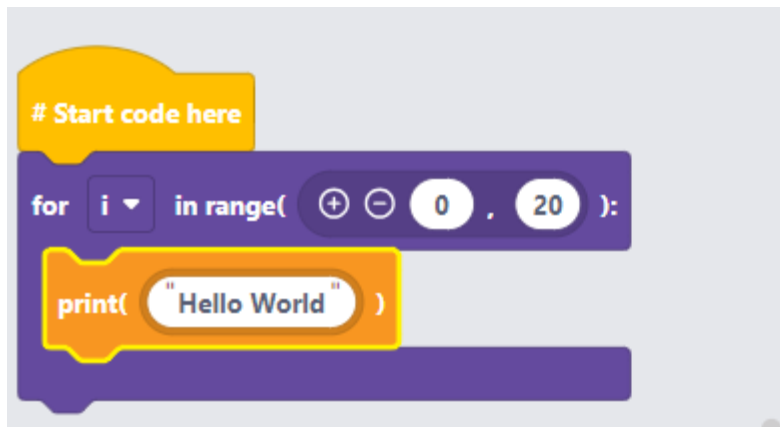
Code

```
1 #Start code here
2 v for i in range(0, 20):
3     pass
4
```

Program Step 2:-



Get print "Hello World" Block to print the name multiple times



Code

```
1 #Start code here
2 for i in range(0, 20):
3     print("Hello World")
4
```

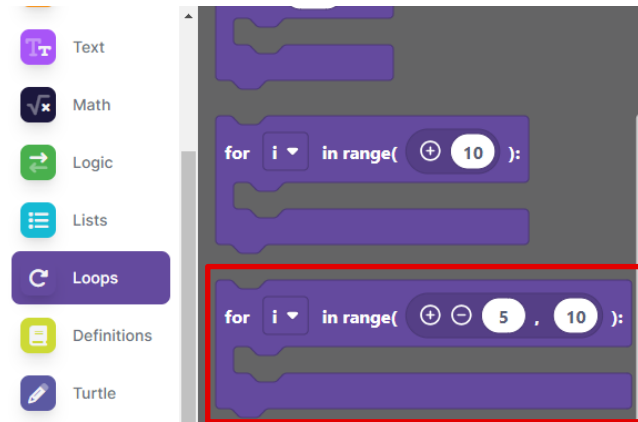
Hello World

Apply & Create

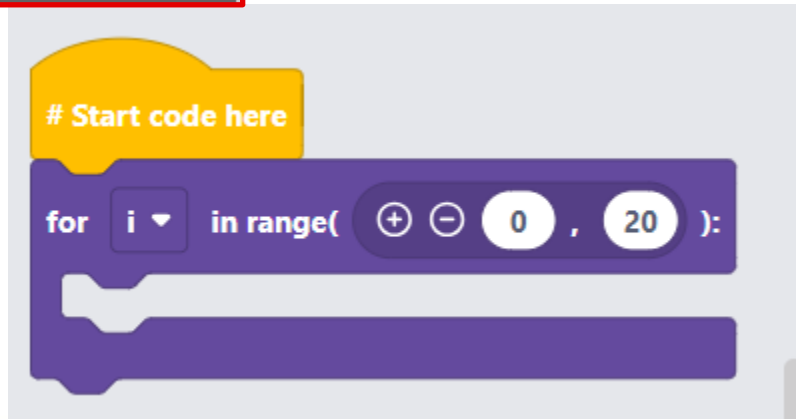
TASK 02:-

**</>WRITE A PROGRAM TO PRINT HELLO
WORLD ALONG WITH THE INDEX 20 TIMES**

Program Step 1:-



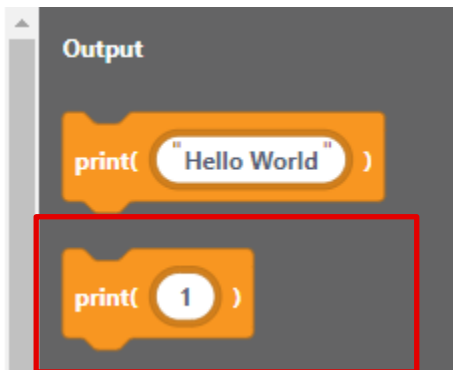
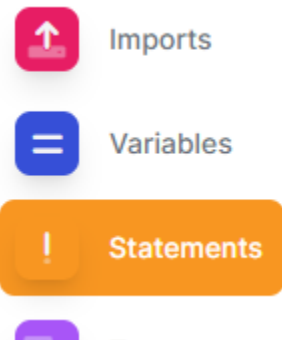
Get a For Loop and set the range to 0,20



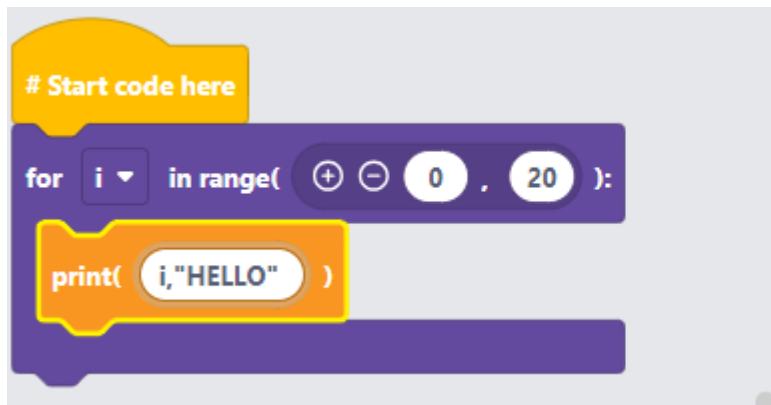
Code

```
1 #Start code here
2 v for i in range(0, 20):
3     pass
4
```

Program Step 2:-



Get print "Hello World" Block to print the name multiple times



Code

```
1 #Start code here
2 for i in range(0, 20):
3     print(i,"HELLO" )
4
```

Output

Powered by  trinket

```
0 HELLO
1 HELLO
2 HELLO
3 HELLO
4 HELLO
5 HELLO
6 HELLO
7 HELLO
8 HELLO
9 HELLO
10 HELLO
11 HELLO
12 HELLO
13 HELLO
14 HELLO
15 HELLO
16 HELLO
17 HELLO
18 HELLO
19 HELLO
```

ACTIVITY SHEETS

Question 1:

What does a for loop do?

- A. Iterates through a range/sequence
- B. Repeats the code for forever
- C. Repeats the code for limited time
- D. check the condition

Question 2:

What is the difference between while loop and for loop?

- A. While loop can run forever
- B. For loop can run forever
- C. while loop can iterates through a list
- D. For loop can compare two values

Question 3:

Which of the following statements is correct?

- A. `for x in range x= 20:`
- B. `for x in range (0,20):`
- C. `for x in range (0,20)`
- D. `for x in range("0,20"):`

Question 4:

What is the output of the following code?

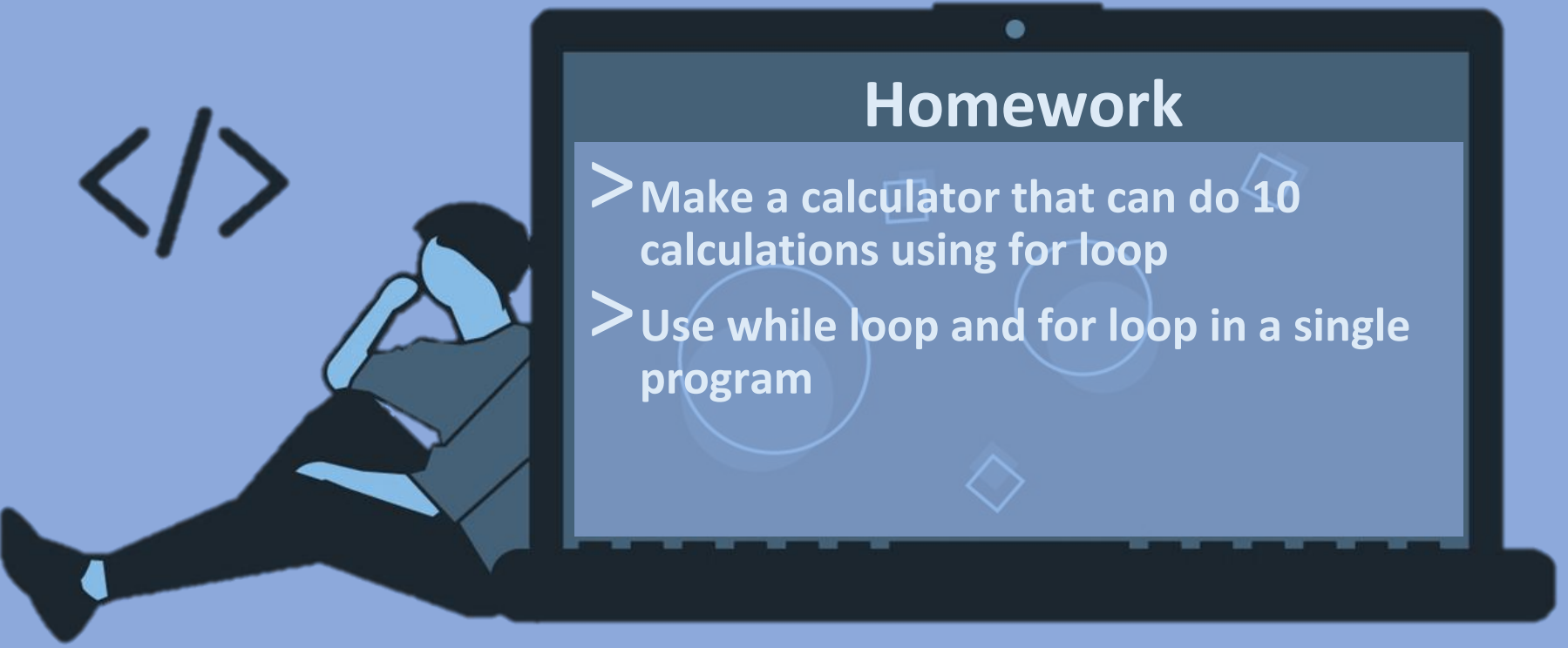
```
for x in range(0,1):  
    print (x)
```

- A. 0,1
- B. 0
- C. 1
- D. 0 1

Question 5:

What is the meaning of `range(0,20)` in code-
for `x in range(0,20)`:

- A. Iteration range of for loop
- B. index
- C. range for it condition
- D. variable



Homework

- > Make a calculator that can do 10 calculations using for loop
- > Use while loop and for loop in a single program