SESSION - 4
IF-ELSE CONDITION

Learning Outcomes:

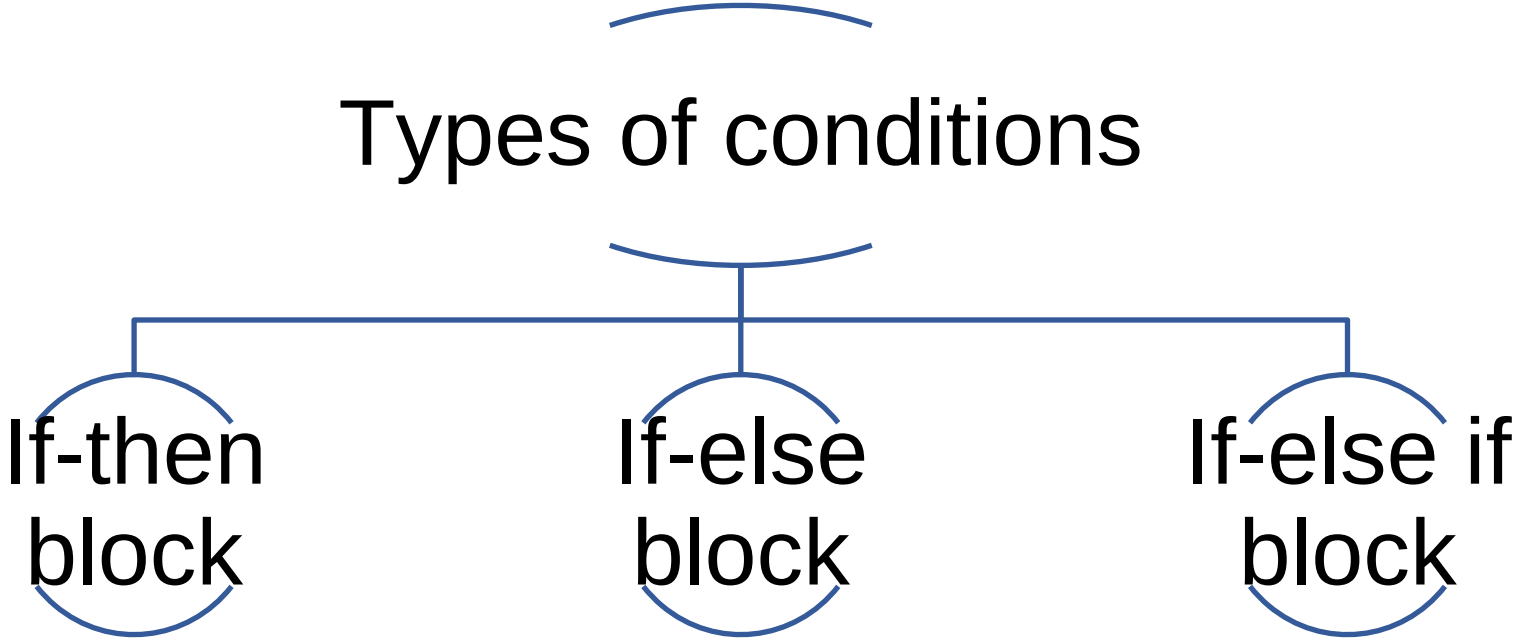
- **Remember**: The students will list different types of blocks being learnt in the session .
- **Understand**: - They will focus on understanding the conditional statement - IF-ELSE
- **Apply**: They will learn to apply and check the execution of the learnt statement
- **Analyze**: They will check their understanding by developing a code.
- **Create**: They will create the code in EduBlocks

Remember & Understanding

CONDITIONS

If and else statement is basically used to compare the condition, then perform one task out of two.
For example, if we want to make program to identify whether you are minor by age or not then we use if statement to compare the age.

TYPES OF CONDITIONS



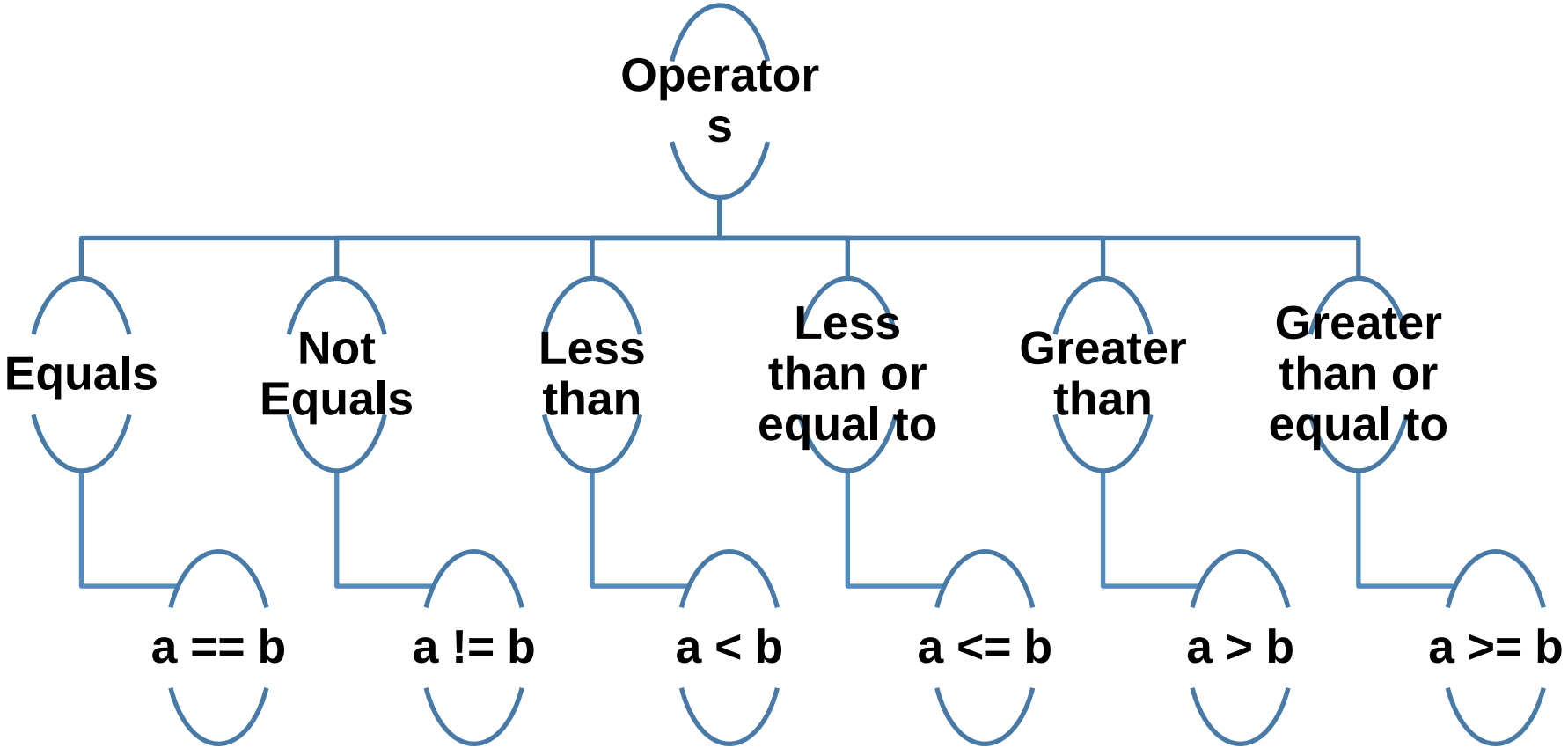
IF-THEN BLOCK

- If statement is the simplest decision-making statement.
- It is used to decide whether a certain statement or block of statements will be executed or not
- i.e. if a certain condition is true then a block of statement is executed otherwise not.

IF-ELSE BLOCK

- A user can decide among multiple options. The if statements are executed from the top down.
- As soon as one of the conditions controlling the if is true, the statement associated with that if is executed, and the rest of the ladder is bypassed.
- If none of the conditions is true, then the final else statement will be executed.

OPERATORS

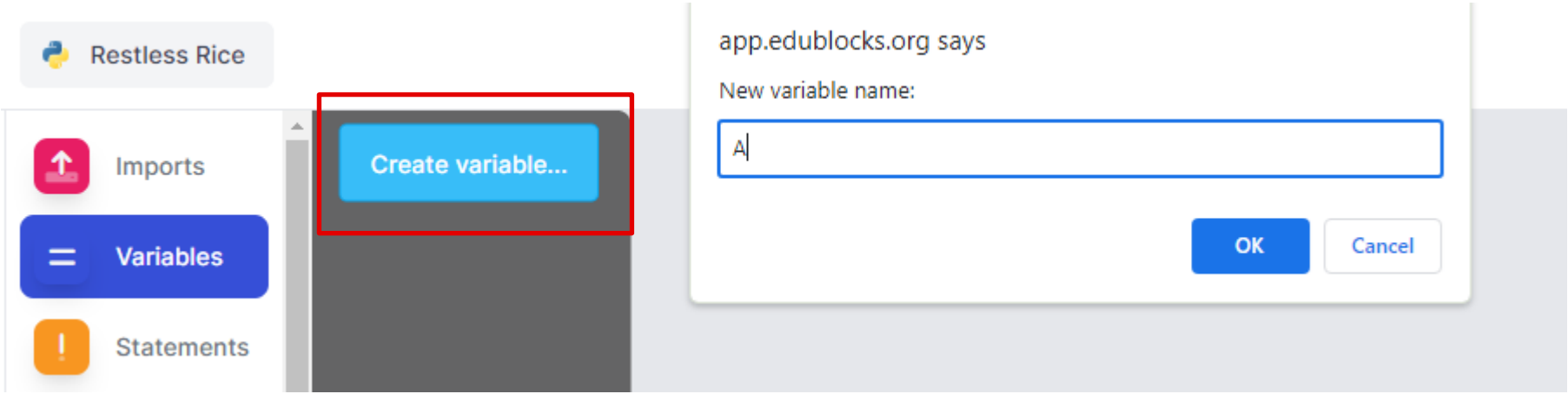

Operators
Equals
Not Equals
Less than
Less than or equal to
Greater than
Greater than or equal to
a == b
a != b
a < b
a <= b
a > b
a >= b

Apply & Create

TASK 01:-

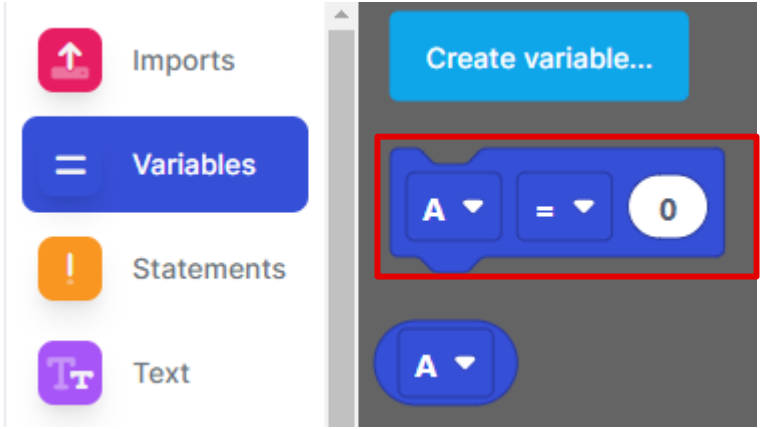
</> WRITE A PROGRAM TO COMPARE TWO GIVEN NUMBERS

Program Step 1:-



Create a variable and name it as ‘A’

Program Step 2:-

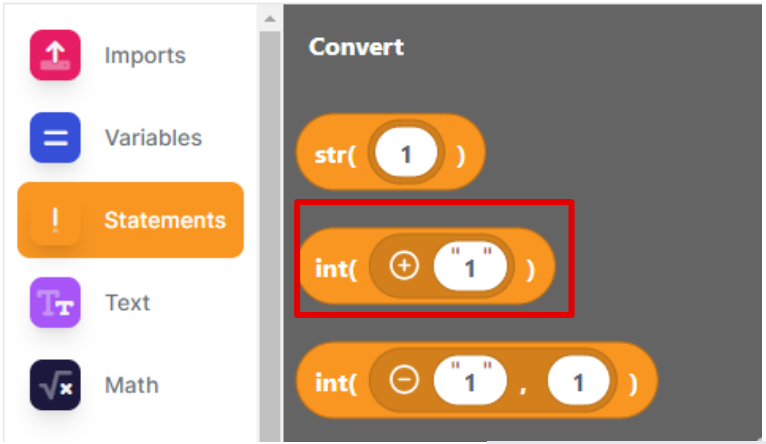


Initialize the "A" variable

Code

```
1  #Start code here
2  A = 0
3
```

Program Step 3:-

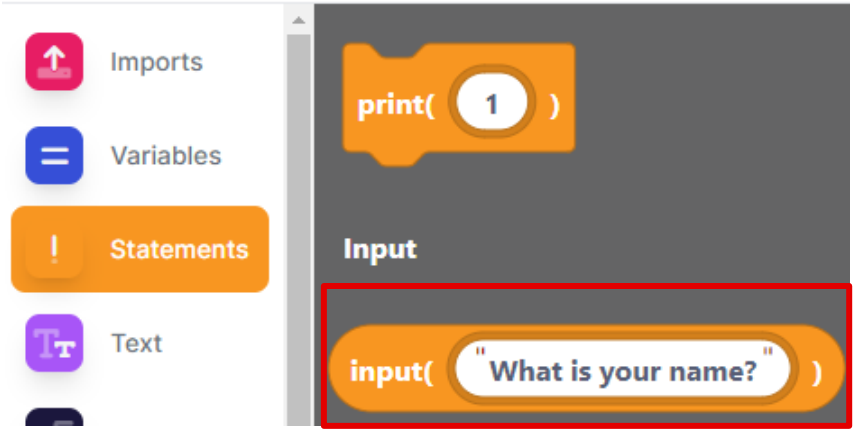


Store an int block to specify that input will be stored as an integer

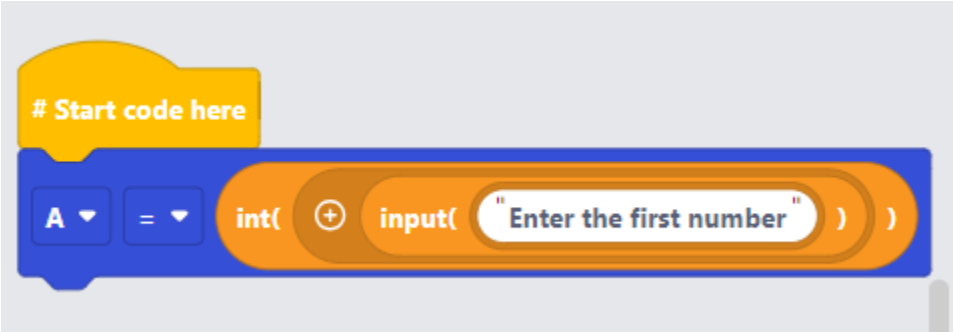
Code

```
1  #Start code here
2  A = int("1")
3
```

Program Step 4:-



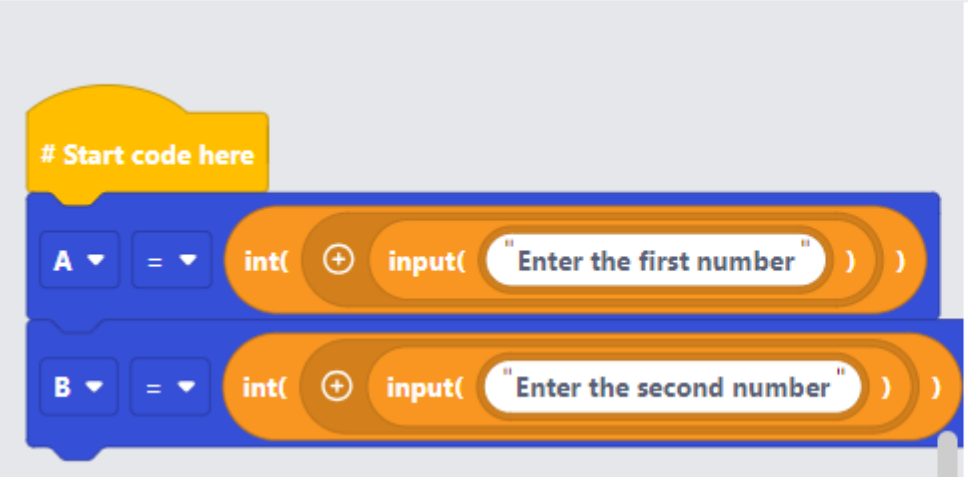
Add an input block to take input from the user



Code

```
1  #Start code here
2  A = int(input("Enter the first number"))
3
```

Program Step 5:-

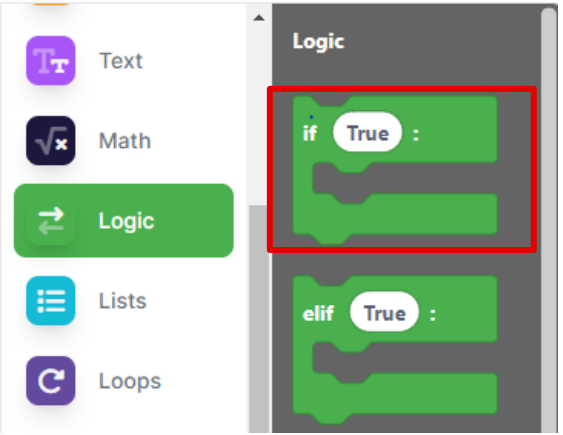


Code

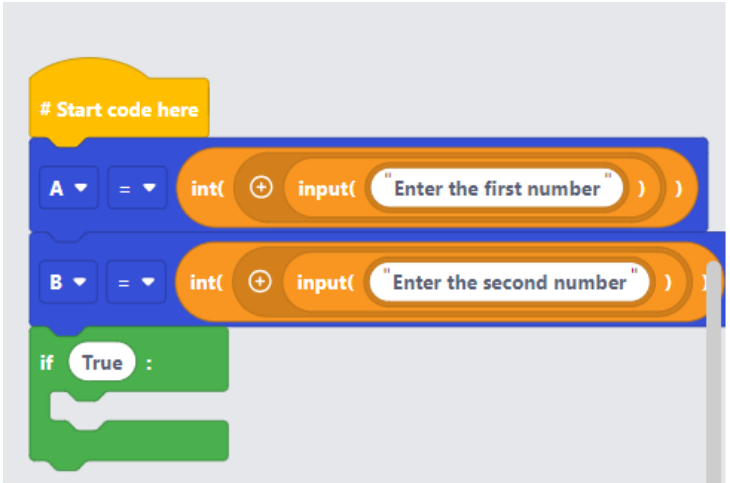
```
1  #Start code here
2  A = int(input("Enter the first number"))
3  B = int(input("Enter the second number"))
4
```

Create another variable with name 'B' the same way to store the second number

Program Step 6:-



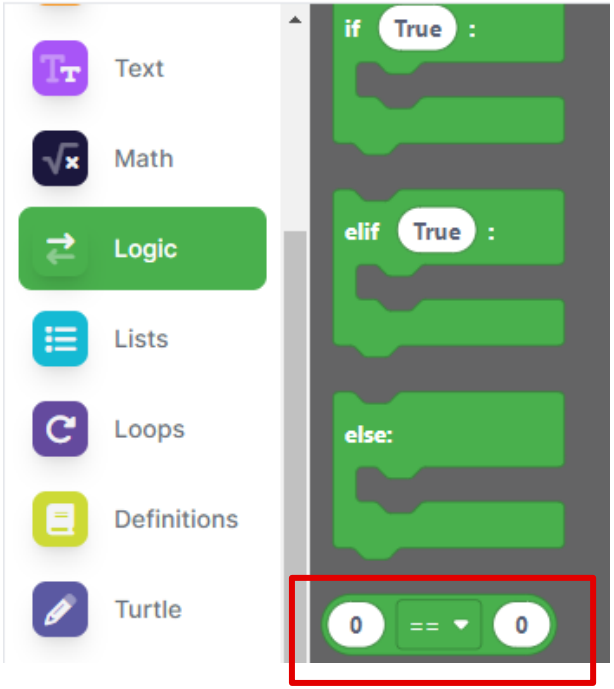
Add an 'if' condition

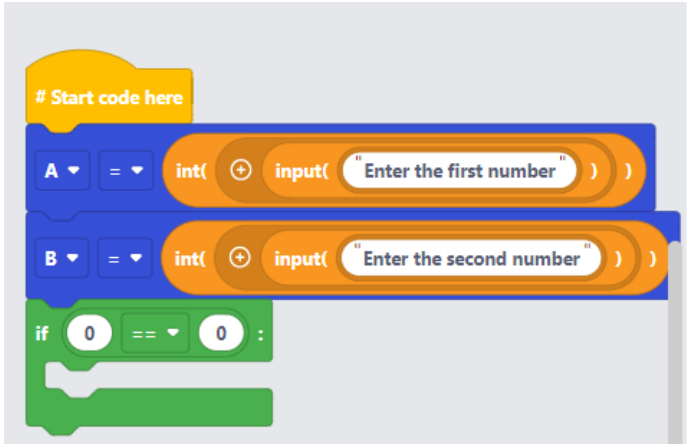


Code

```
1  #Start code here
2  A = int(input("Enter the first number"))
3  B = int(input("Enter the second number"))
4  if True:
5      pass
6
```

Program Step 7:-



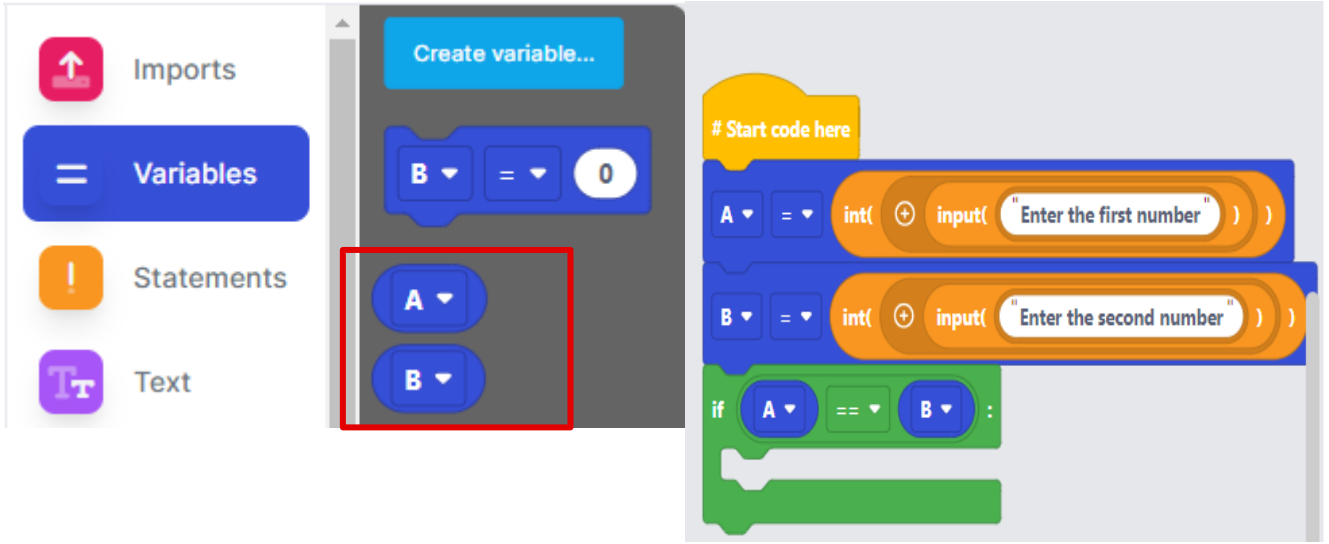


Code

```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if 0 == 0:
    pass

```

Add a comparison block to the 'if condition' to check what operation has user chosen

Program Step 8:-



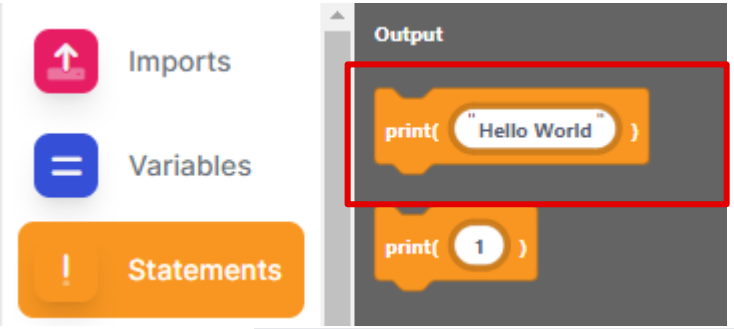
Code

```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if A == B:
    pass

```

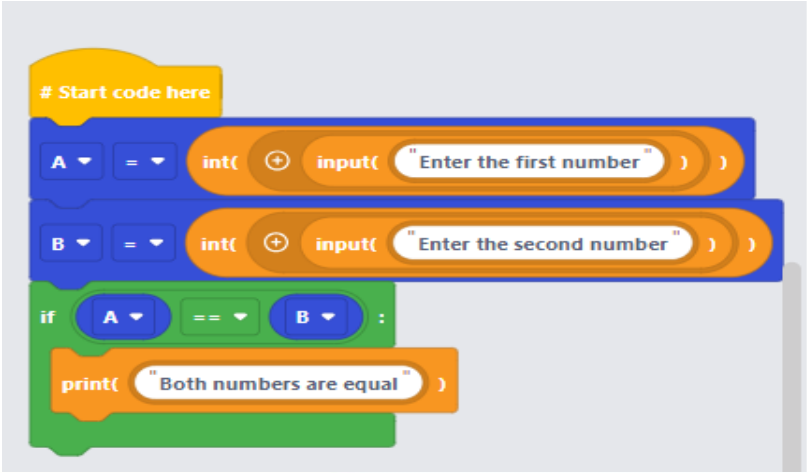
Add the ‘A' value block to the left of the comparison block to compare the input given by user.

Add the ‘B' value block to the right of the comparison block to compare the input given by user

Program Step 9:-



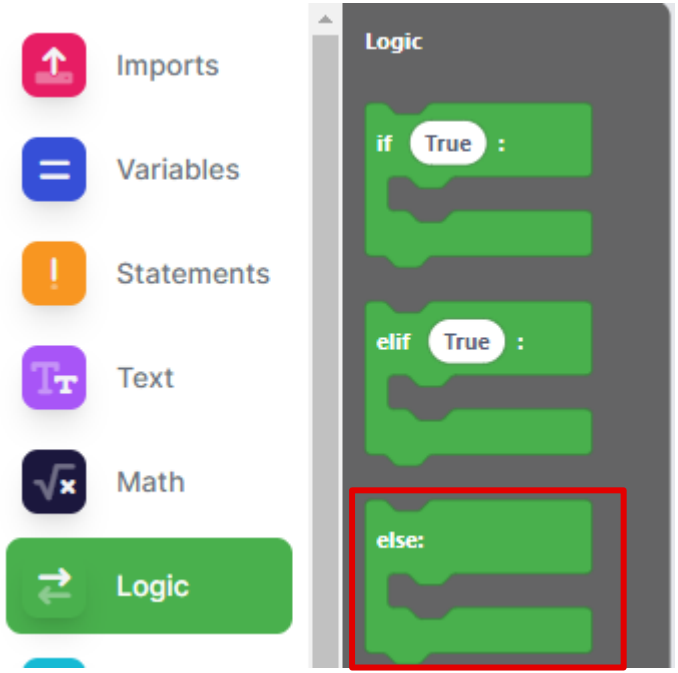
Connect print "Hello World" block and change the text to “Both A and B are equal"



Code

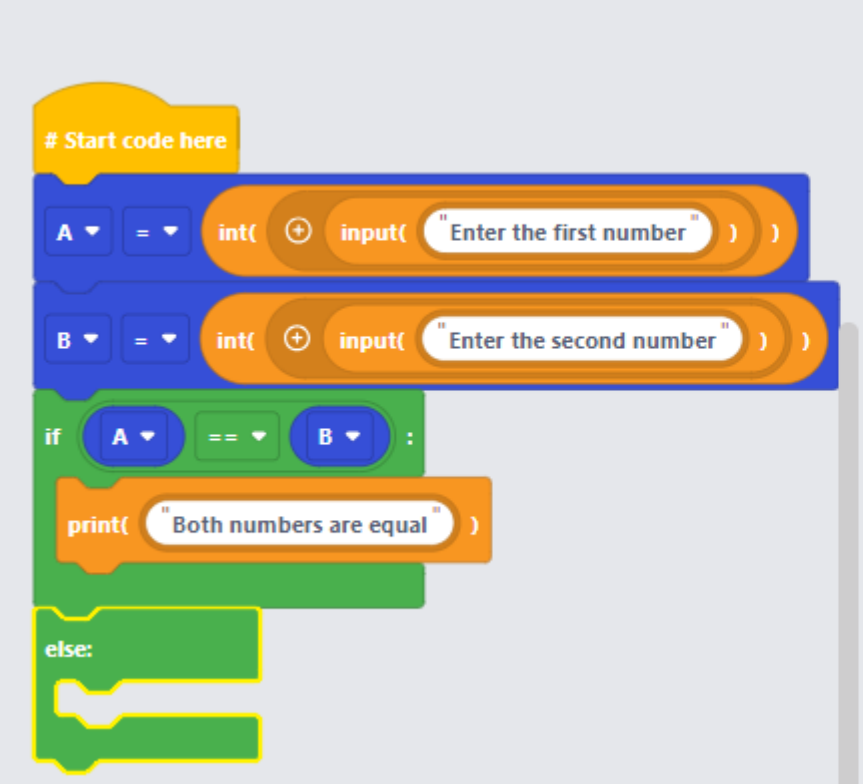
```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if A == B:
    print("Both numbers are equal")

```

Program Step 10:-



Take a ‘Else’ block from the Logic

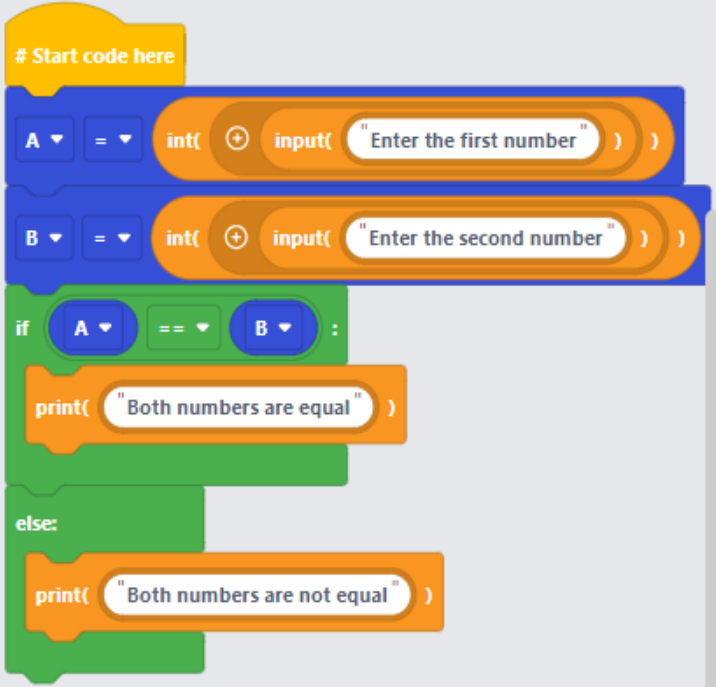
Program Step 11:-



Code

```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if A == B:
    print("Both numbers are equal")
else:
    pass

```

Program Step 12:-



Code

```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if A == B:
  print("Both numbers are equal")
else:
  print("Both numbers are not equal")

```

Take a print hello world from the statement and connect it with else block and write both numbers are not equal

Output

```
Powered by trinket
Enter the first number 10
Enter the second number 10
Both numbers are equal
```

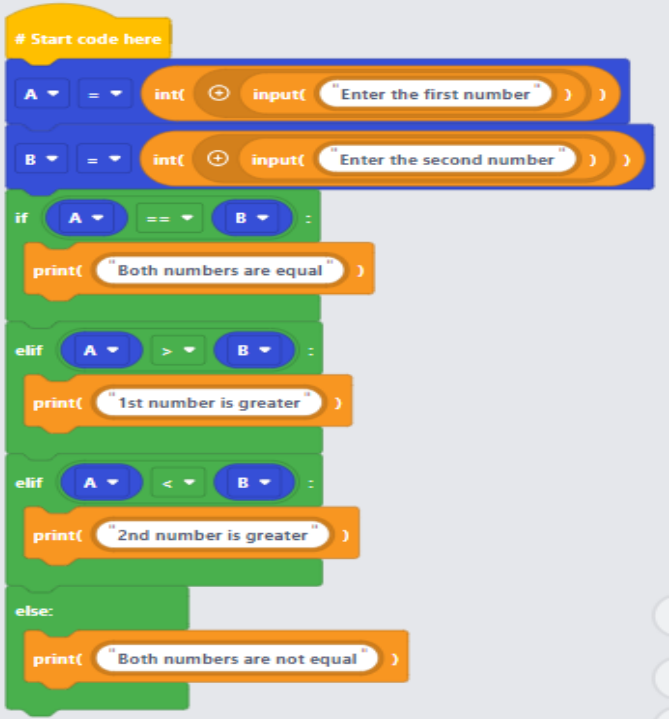
```
Powered by trinket
Enter the first number 4
Enter the second number 7
Both numbers are not equal
```

Apply & Create

TASK 02:-

</> WRITE A PROGRAM TO COMPARE VALUES WITH PYTHON IF AND ELSE STATEMENT

Program



Code

```
#Start code here
A = int(input("Enter the first number"))
B = int(input("Enter the second number"))
if A == B:
  print("Both numbers are equal")
elif A > B:
  print("1st number is greater")
elif A < B:
  print("2nd number is greater")
else:
  print("Both numbers are not equal")

```

Output

```
Powered by trinket
Enter the first number 56
Enter the second number 65
2nd number is greater
```

```
Powered by trinket
Enter the first number 76
Enter the second number 67
1st number is greater
```

```
Powered by trinket
Enter the first number 56
Enter the second number 56
Both numbers are equal
```

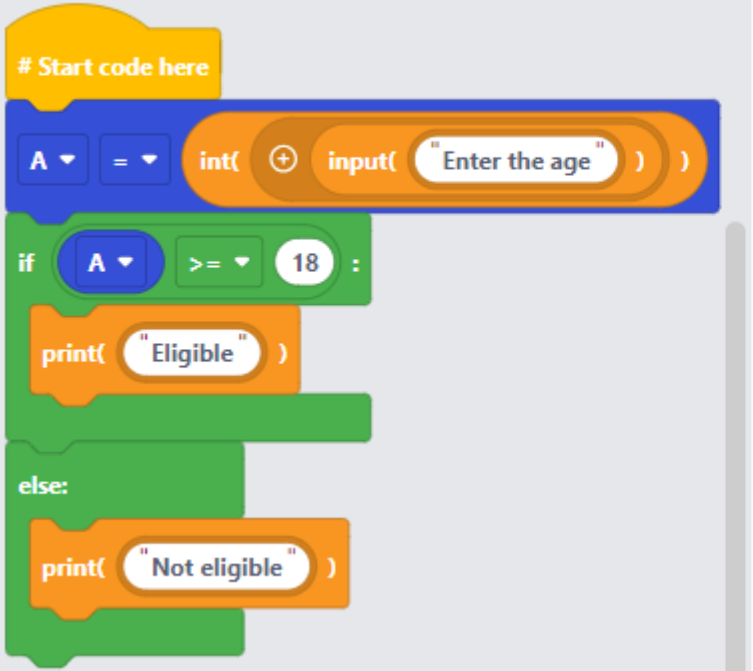
Apply & Create

OMO TEC
On My Own Technology

TASK 03:-

</> WRITE A PROGRAM TO CHECK WHETHER THE PERSON IS ELIGIBLE FOR VOTING OR NOT

Program



Code

```
1  #Start code here
2  A = int(input("Enter the age"))
3  if A >= 18:
4      print("Eligible")
5  else:
6      print("Not eligible")
7
```

Output

```
Powered by trinket
Enter the age 18
Eligible
```

```
Powered by trinket
Enter the age 15
Not eligible
```

```
Powered by trinket
Enter the age 50
Eligible
```

ACTIVITY SHEETS

Question:1

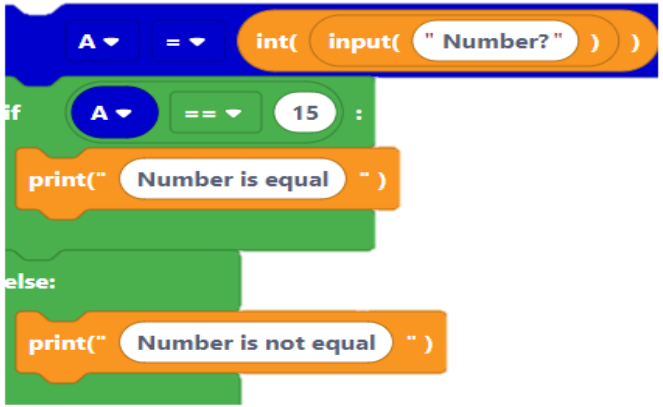
Which python operator means ‘less than equal to’?

A. <=
B. >=
C. ==
D. !=

Question:2

What is the output of the following code if input is 16:

A. Number is equal
B. Number is not equal
C. Number?
D. None of the above



Question:3 The result of this program:

```
Friday = False
if Friday:
print "Jeans day!"
else:
print "Uniform day"
```

A. Jeans day
B. Uniform day
C. Today is friday
D. Not friday

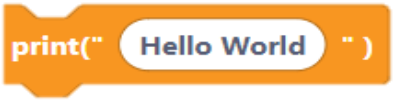
Question:4

This operator means that one value is the same as the other value

A. Equal to(=)
B. Forward slash(\)
C. Plus(+)
D. Asterik(*)

Question:5

Which function is used to take the data from the user input



Homework

</> Make a program to take age and tell whether its infant or child or adult