



SESSION - 8

SNAKE AND LADDER GAME



Learning Outcomes:

- **Remember:** The students will recall the concepts learnt .
- **Understand:** They will focus on understanding the logics to build the game “Snake and Ladder “
- **Apply:** They will learn to apply the concepts of IF-ELSE , import libraries, create user-inputs
- **Analyze:** They will check their understanding by developing a code .
- **Create:** They will create the code in EduBlocks

ACTIVITY DESCRIPTION

Remember & Understanding

What is happening in Game:

- 1. Display the welcome message.**
- 2. Until one of the player wins do the following:**
 - 2.1- Roll the dice.**
 - 2.2- Move the player forward for the value got on the dice roll.**
 - 2.3- If the player is on snake's head, move down to its tail.**
 - 2.4- If the player is on ladder's bottom, take it to its top.**

Apply & Create

TASK 01:-

**</> WRITE A PROGRAM TO MAKE SNAKE AND
LADDER GAME**

Program Step 1:-

- import time and import random block
- Take print block and print message "Welcome to snake and ladder game"



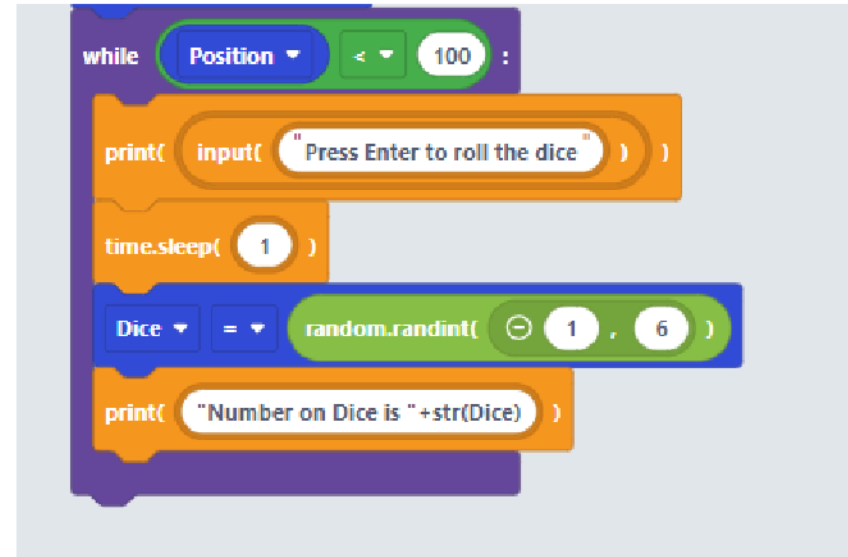
Program Step 2:-

- Create a variable of position which is equal to 0.
- Take a While loop with condition if position is less than 100 then print "press enter to roll the dice."

```
# Start code here
import time
import random
print( "Welcome to snake and ladder game" )
Position = 0
while Position < 100 :
    print( input( "Press Enter to roll the dice" ) )
```

Program Step 3:-

- Create a variable of dice to pick the random number from 1 to 6.
- Print the number on dice.



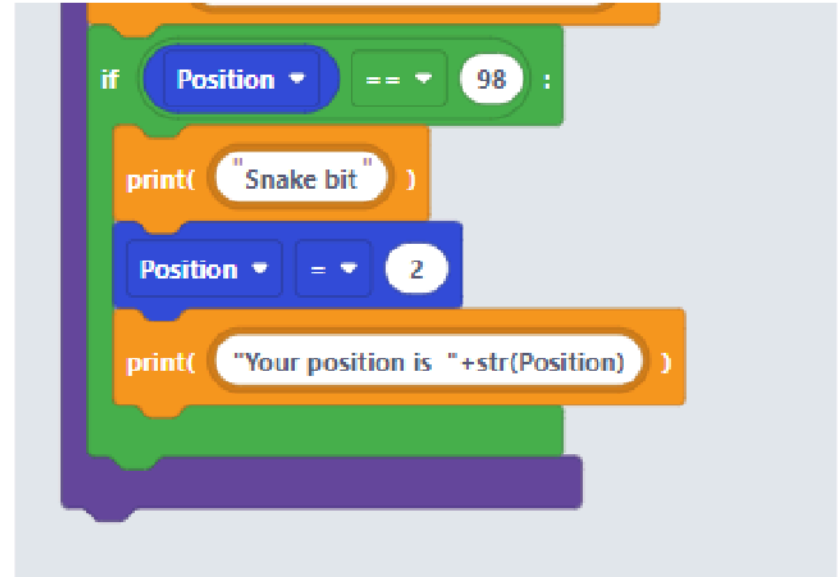
Program Step 4:-

- The new position is equal to the position + Dice .
- Then print the “your Position is”



Program Step 5:-

- Take a if condition where position is equal to 98.
- Print "Snake bit"
- And position is equal to 2.



Program Step 6:-

- Similarly take 4 if statements for the snake bite at different positions.

```

elif Position == 76 :
    print( "Snake bit" )
    Position = 24
    print( "Your position is " + str(Position) )

elif Position == 64 :
    print( "Snake bit" )
    Position = 15
    print( "Your position is " + str(Position) )
    
```

```

print( "Your position is " + str(Position) )

elif Position == 53 :
    print( "Snake bit" )
    Position = 42
    print( "Your position is " + str(Position) )

elif Position == 37 :
    print( "Snake bit" )
    Position = 9
    print( "Your position is " + str(Position) )
    
```

Program Step 7:-

- Now take 5 elif statement for getting ladder and printing new positions.

```

elif Position == 8 :
    print( "got a Ladder" )
    Position = 88
    print( "Your position is "+str(Position) )

elif Position == 28 :
    print( "got a Ladder" )
    Position = 72
    print( "Your position is "+str(Position) )
    
```

```

elif Position == 45 :
    print( "got a Ladder" )
    Position = 65
    print( "Your position is "+str(Position) )

elif Position == 60 :
    print( "got a Ladder" )
    Position = 86
    print( "Your position is "+str(Position) )
    
```

Program Step 4:-

- At the end print you won the game.



Syntax

```

1  #Start code here
2  import time
3  import random
4  print("Welcome to snake and ladder game")
5  Position = 0
6  while Position < 100:
7      print(input("Press Enter to roll the dice"))
8      time.sleep(1)
9      Dice = random.randint(1, 6)
10     print("Number on Dice is "+str(Dice))
11     Position = Position + Dice
12     print("Your position is "+str(Position))
13     if Position == 98:
14         print("Snake bit")
15         Position = 2
16         print("Your position is "+str(Position))
17     elif Position == 76:
18         print("Snake bit")
19         Position = 24
20         print("Your position is "+str(Position))
    
```

Syntax

```

21 v elif Position == 64:
22     print("Snake bit")
23     Position = 15
24     print("Your position is "+str(Position))
25 v elif Position == 53:
26     print("Snake bit")
27     Position = 42
28     print("Your position is "+str(Position))
29 v elif Position == 37:
30     print("Snake bit")
31     Position = 9
32     print("Your position is "+str(Position))
33 v elif Position == 8:
34     print("got a Ladder")
35     Position = 88
36     print("Your position is "+str(Position))
37 v elif Position == 28:
38     print("got a Ladder")
39     Position = 72
40     print("Your position is "+str(Position))

```

Syntax

```

41 v elif Position == 45:
42     print("got a Ladder")
43     Position = 65
44     print("Your position is "+str(Position))
45 v elif Position == 60:
46     print("got a Ladder")
47     Position = 86
48     print("Your position is "+str(Position))
49 v elif Position == 35:
50     print("got a Ladder")
51     Position = 47
52     print("Your position is "+str(Position))
53 print("You won the game")
54

```

Output

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Welcome to snake and ladder game

Press Enter to roll the dice

Number on Dice is 2

Your position is 2

Press Enter to roll the dice

Number on Dice is 6

Your position is 8

got a Ladder

Your position is 88

Press Enter to roll the dice █

ACTIVITY SHEETS

Question 1:

For Condition checking which block we use?

- A. Let $x=100$
- B. $X<<100$
- C. $x=100$
- D. $X=!100$

Question 2:

Which of the following are valid Python variable names:

- A. return
- B. ver.1.3
- C. route466
- D. 4square

Question 3: Look at the following code: What type of data is stored in the variable age?

```
age = 23
```

- A. int
- B. float
- C. double
- D. name

Question 4:

If I want to store my height in a variable, which of the following would be a good variable name in best practice?

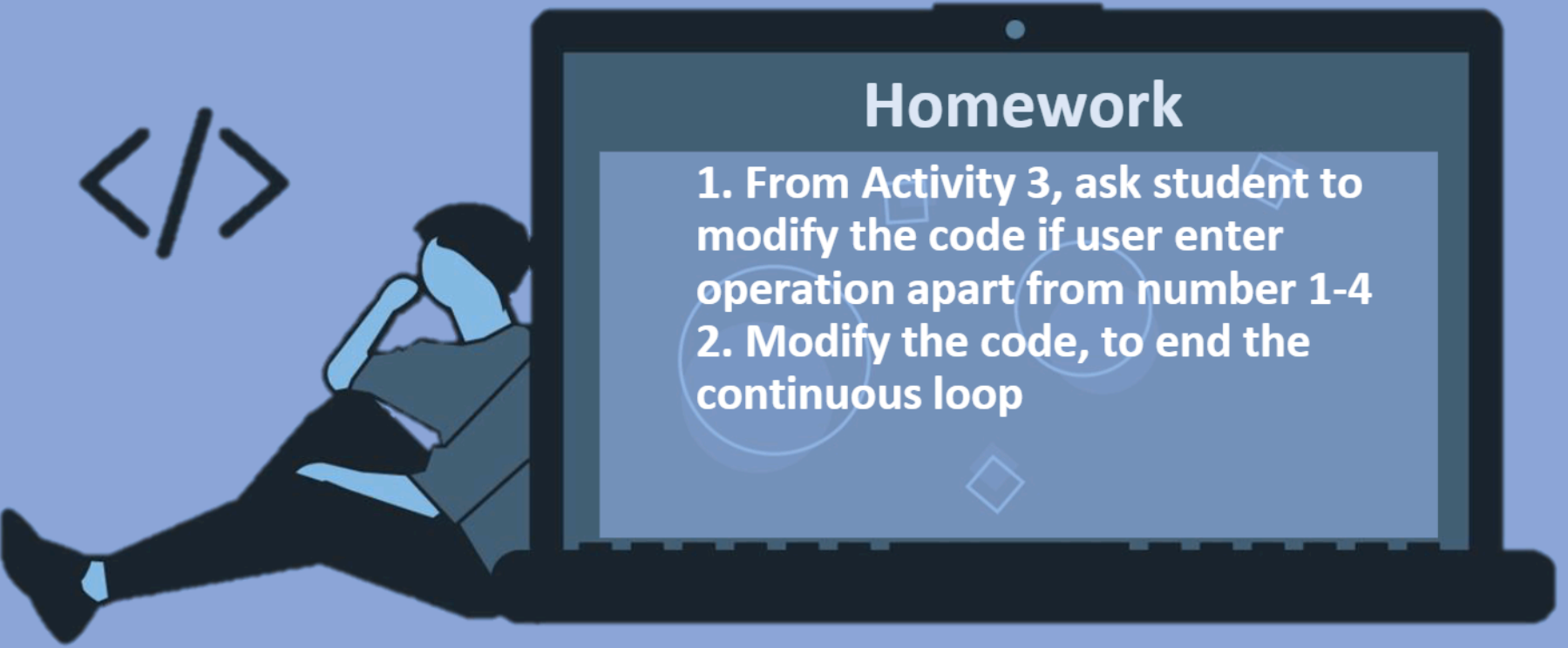
- A. inch
- B. Height
- C. adxxcc
- D. number

Question 5: Look at the following code:

```
age = "23"
```

```
age = int(age) What does the int() function do to the data in my variable?
```

- A. Does nothing
- B. Changes the string to float
- C. Changes the number to string
- D. Changes the string to integer



Homework

1. From Activity 3, ask student to modify the code if user enter operation apart from number 1-4
2. Modify the code, to end the continuous loop