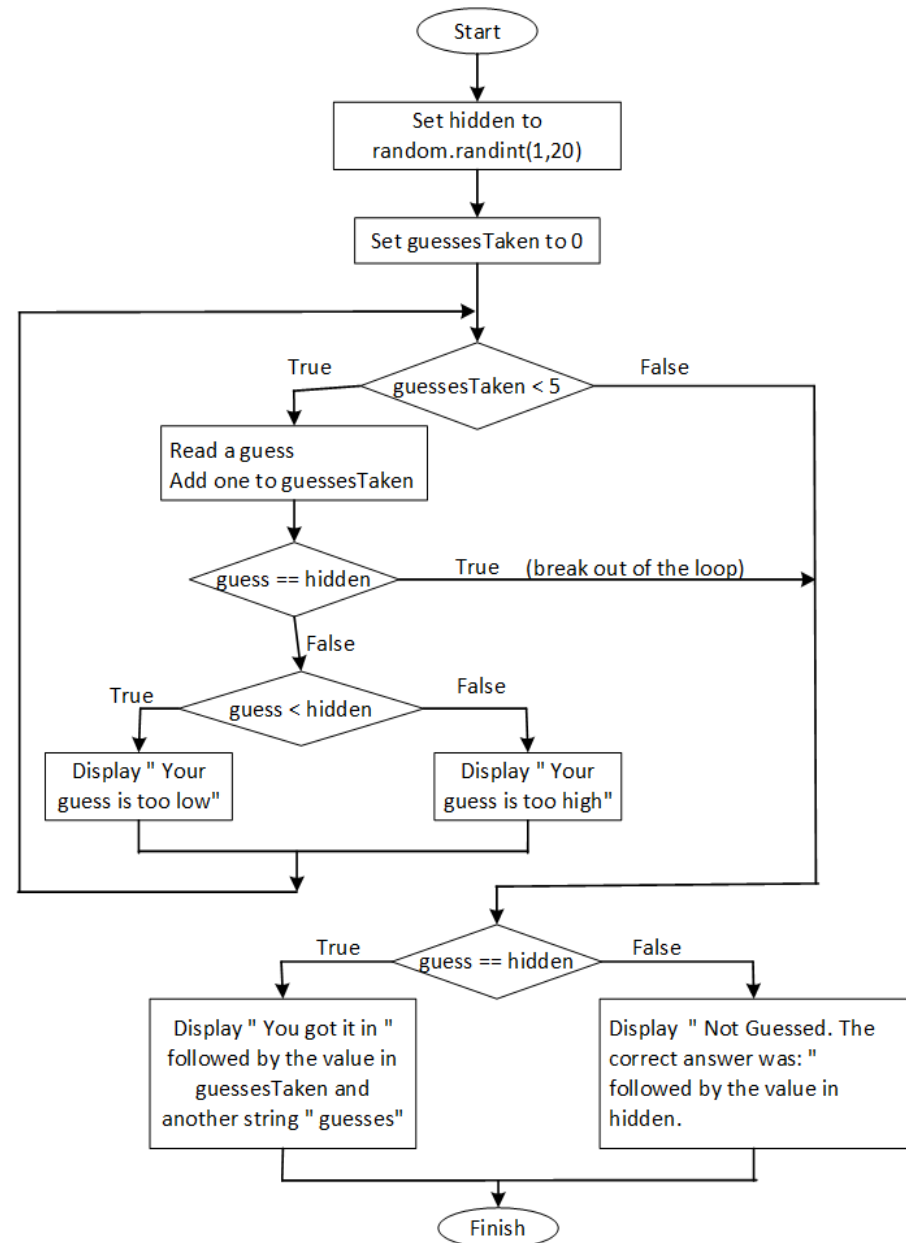


Tutorial 4, Exercise 3

Guess the number

- This solution should only allow a maximum of 5 guesses. If a correct guess is entered then use a break to exit the while loop.
 - Write a program that picks a random number between 1 and 20 and allows the user a maximum of five attempts to guess the number.
 - For each incorrect guess, the program will let the user know if the correct answer is higher or lower than the user's guess.
 - If the user doesn't guess the answer in five attempts, the loop will end and the program will tell the user what the number was.
 - If the user guesses the answer within 5 attempts, the program will break from the loop and tell the user they are correct and how many guesses it took.
 - You will need to add a check directly after the loop to decide which message is appropriate. E.g., either a) or b) above.

Flowchart for Tutorial exercise 3



initiation phase

```
import random
hidden = random.randint(1, 20)
guesses_taken = 0
```

while loop with sentinel value

```
while (1)_____ # (1) exit loop if 5 guesses taken
guess = int(input('Guess the hidden number (integer between 0 and 20): '))
(2) _____
if guess == hidden:
    (3)_____ # (3) exit loop if guess found
if guess < hidden:
    print("Your guess is (4) _____")
else :
    print("Your guess is (5)_____")
```

while loop terminated

```
if (6)_____
    print('You got it in', guesses_taken, 'guesses')
else :
    print('Not guessed. The correct answer was: ', hidden)
```

initiation phase

```
import random
hidden = random.randint(1, 20)
guesses_taken = 0 # initialise variable for while loop
```

while loop with sentinel value

```
while guesses_taken < 5 : # (1) exit loop if 5 guesses taken    guess = int(input('Guess the
hidden number (integer between 0 and 20): '))
    guesses_taken +=1# (2) increase variable by one
    if guess == hidden:
        break # (3) exit loop if guess found
    if guess < hidden:
        print("Your guess is too low") #(4)
    else :
        print("Your guess is too high")  #(5)
```

while loop terminated

```
if guess == hidden: #(6) guess found
    print('You got it in ', guesses_taken, ' guesses')
else : # else guess not found
    print('Not guessed. The correct answer was: ', hidden)
```