For Loop Assignment Questions:

Q1. Print numbers from 1 to 10 using a `for` loop.

```
# Output:
# 1 2 3 4 5 6 7 8 9 10
```

Q2. Print the table of 5 (from 1 to 10).

```
# Output:
# 5 10 15 20 25 30 35 40 45 50
```

Q3. Print the sum of numbers from 1 to 10.

```
# Output:
# Sum = 55
```

Q4. Print even numbers from 1 to 20.

```
# Output:
# 2 4 6 8 10 12 14 16 18 20
```

Q5. Print numbers in reverse from 10 to 1.

```
# Output:
# 10 9 8 7 6 5 4 3 2 1
```

Q6. Take a number from the user and print its table (1 to 10).

```
# Input: 7
# Output:
# 7 14 21 28 35 42 49 56 63 70
```

Q7. Print all odd numbers from 1 to 50.

```
# Output:
# 1 3 5 7 9 11 ... 49
```

Q8. Take 5 numbers from the user and print their total sum.

```
# Input: 5 10 2 8 6
# Output: Sum = 31
```

Q9. Print all numbers in a range that are divisible by 3.

```
# Input: Start = 1, End = 30
# Output: 3 6 9 12 15 18 21 24 27 30
```

Q10. Print only those numbers between 1 and 50 that are divisible by both 3 and 4.

```
# Output:
# 12 24 36 48
# Hint: Use if condition inside the loop: number % 3 == 0 and number % 4 == 0
```

Q11. Count how many digits are in a sentence.

```
# Input: "My roll number is 12345 and age is 20"
# Output: Digits = 7
# Hint: Check if each character is a digit using `.isdigit()`
```

Q12. Count the number of words in a sentence.

```
# Input: "Python is very easy to learn"
# Output: Words = 6
# Hint: Use `.split()` to break the sentence and `len()` to count words.
```

Q13. Count how many uppercase and lowercase letters are in a sentence.

```
# Input: "Hello World"
# Output: Uppercase = 2, Lowercase = 8
# Hint: Use `.isupper()` and `.islower()` in the loop.
```

Q14. Reverse a word using a loop (no slicing allowed).

```
python
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# Input: "Python"
# Output: "nohtyP"
# Hint: Use a loop to build the reversed string character by character.
```

Q15. Count how many times a specific letter appears in a sentence.

```
# Input: "Programming is powerful", Letter: "r"
# Output: Letter 'r' found 3 times
# Hint: Loop through sentence and count matches with the letter.
```

Q16. Replace all spaces in a sentence with underscores _.

```
# Input: "I love Python programming"
# Output: "I_love_Python_programming"
# Hint: Use a loop to build a new string by checking for spaces.
```

Q17. Replace every vowel in a string with *.

```
# Input: "Programming is fun"
# Output: "Pr*gr*mm*ng *s f*n"
# Hint: Check if character is vowel, then replace with `*`, else keep it.
```

Q18. Count how many times the word “the” appears in a sentence (case-insensitive).

```
# Input: "The cat and the dog are on the roof."
# Output: 'the' appears 3 times
# Hint: Convert sentence to lower case and split. Then count.
```

Q19. Print the longest word in a sentence.

```
# Input: "Python is powerful and amazing"
# Output: Longest word = "powerful"
# Hint: Compare length of each word using a loop.
```

Q20. Count how many consonants are in a word.

```
# Input: "Programming"
# Output: Consonants = 8
# Hint: Check if character is alphabet and not a vowel.
```

While Loop Questions:

Q1. Keep asking the user for numbers until they enter an even number.

```
# Input: 5, 7, 3, 4
# Output: Loop stopped (because 4 is even)
# Hint: Use while loop with condition: number % 2 != 0
```

Q2. Ask the user for a password until they enter the correct one ("admin123").

```
# Output:
# Enter password: test
# Wrong password
# Enter password: admin123
# Access granted
# Hint: Use a while loop with condition password != "admin123"
```

Q3. Guess a secret number (e.g., 10). Keep asking the user until they guess it correctly.

```
# Output:
# Guess the number: 5
# Try again
# Guess the number: 10
# Correct!
# Hint: Use a while loop until guess == 10
```

Q4. Keep asking the user for yes/no until they say “no”.

```
# Input: yes, yes, no
# Output: Loop exited
# Hint: while input != "no"
```

Q5. Start from 1 and keep doubling the number until it becomes greater than 100.

```
# Output:
# 1 2 4 8 16 32 64 128
# Hint: Start with i = 1, while i <= 100: print and double i
```

Q6. Keep taking numbers from the user and print their squares until the user types “stop”.

```
# Input: 4 → 16
# Input: 5 → 25
# Input: stop → exit
# Hint: Use str input, check if input == "stop", otherwise convert to int and
square
```

Q7. Keep asking the user to enter a number until they enter a negative number. At the end, print how many numbers were entered (excluding the negative one).

```
# Input:
# Enter number: 5
# Enter number: 8
# Enter number: 2
# Enter number: -1

# Output:
# Total valid numbers entered = 3

# Hint:
# Use a `while` loop to keep asking input.
# Break the loop when the number is negative.
# Keep a counter to count valid numbers.
```

Q8. Ask the user to enter a word until it contains the letter 'e'.

```
# Input: cat → No 'e'
# Input: dog → No 'e'
# Input: pen → Contains 'e' → Loop ends
# Output: Word accepted: pen
# Hint: Use `'e' in word` condition
```