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BIT-23F-042

SECTION: "B"

ARTIFICIAL INTELLIGENCE

LAB 5

ASSIGNMENT

MISS: AQSA Umer

Q: write a program that uses a loop to print number from 1 to 10

CODE:

```python
# Loop to print numbers from 1 to 10
for i in range(1, 11):
    print(i)
```

OUTPUT:

1

2

3

4

5

6

7

8

9

10

Q: write a function that calculates the sum of all numbers upto a given number using a loop

CODE:

```python
def sum_up_to_n(n):
    total = 0
    for i in range(1, n + 1):
        total += i
    return total
```

```
# Example usage
result = sum_up_to_n(5)
print(result)
# Output will be 15 (1 + 2 + 3 + 4 + 5)
```

OUTPUT:

1 + 2 + 3 + 4 + 5 = 15

Q: Write Code Using Loop And Nested Loop To Create Star Pattern

CODE:

```
def star_pattern(n):
    for i in range(1, n + 1):
        for j in range(i):
            print("*", end=" ")
        print()
```

```
# Example usage
star_pattern(5)
```

OUTPUT:

*

* *

* * *

* * * *

* * * * *

Q: WRITE A FUNCTION THAT TAKES A LIST OF NUMBERS AND PRINT ONLY THE EVEN NUMBERS

CODE:

```python
def print_even_numbers(numbers):
    # Loop through each number in the list
    for num in numbers:
        # Check if the number is even
        if num % 2 == 0:
            print(num)

# Example usage
numbers_list = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
print_even_numbers (numbers_list)
```

OUTPUT:

```
2
4
6
8
10
```