Week 1 – Core Java Fundamentals (Java Developer Intern)

Aim: NUMBER UTILITY PROGRAM

Description: Create a Java program that performs operations like prime check, palindrome, factorial, Fibonacci, etc.

Output:

```
=== Number Utilities ===
1. Check if Prime
2. Check if Palindrome
3. Calculate Factorial
4. Generate Fibonacci Sequence
5. Check Armstrong Number
6. Exit

Your choice: 1

Enter a number: 13
13 is a prime number!

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```

2) Palindrome:

```
=== Number Utilities ===
1. Check if Prime
2. Check if Palindrome
3. Calculate Factorial
4. Generate Fibonacci Sequence
5. Check Armstrong Number
6. Exit

Your choice: 2

Enter a number: 121
121 is a palindrome!

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```

3) Factorial :

```
=== Number Utilities ===
1. Check if Prime
2. Check if Palindrome
3. Calculate Factorial
4. Generate Fibonacci Sequence
5. Check Armstrong Number
6. Exit

Your choice: 3

Enter a number: 5
5! = 120

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```

4) Fibonacci Sequence:

```
=== Number Utilities ===
1. Check if Prime
2. Check if Palindrome
3. Calculate Factorial
4. Generate Fibonacci Sequence
5. Check Armstrong Number
6. Exit

Your choice: 4

How many terms? 6
Fibonacci sequence: 0, 1, 1, 2, 3, 5

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```

5) Armstrong Number:

```
=== Number Utilities ===
1. Check if Prime
2. Check if Palindrome
3. Calculate Factorial
4. Generate Fibonacci Sequence
5. Check Armstrong Number
6. Exit

Your choice: 5

Enter a number: 371
371 is an Armstrong number!

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```