

AIPP LAB 18

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Completed this Assignment using VS – Gemini AI Integration.

Task 1:

Translate a Simple Program (Python → JavaScript)

CODE:

The screenshot shows a code editor window with a Python file named `TASK18.1.py`. The code contains a function `print_numbers` that prints integers from 1 to 10. Below the code editor is a terminal window showing the execution of the script and its output.

```
PROBLEMS OUTPUT TERMINAL PORTS
> ▾ TERMINAL
...
● PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> c:; cd 'c:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18' & python.exe 'c:\Users\ACER\.vscode\extensions\ms-python.debugpy-2025.16.0-win32-x64\bundle\H AIPP LABS\ASSIGNMENT 18\TASK18.1.py'
1
2
3
4
5
6
7
8
9
10
○ PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>
```

main.js		Run	Output
<pre> 1 function printNumbers() { 2 for (let i = 1; i <= 10; i++) { 3 console.log(i); 4 } 5 } 6 7 printNumbers(); 8 9 10 </pre>		1 2 3 4 5 6 7 8 9 10 <p>== Code Execution Successful ==</p>	

Task 2:

Convert Conditional Statements (Java → Python)

CODE:

```

#TASK 18.2
def check_number(num):
    if num > 0:
        print("The number is positive")
    elif num < 0:
        print("The number is negative")
    else:
        print("The number is zero")

check_number(-5)
check_number(0)
check_number(7)

```

```

PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> ^C
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> c;; cd 'c:\User
python.exe' 'c:\Users\ACER\vscode\extensions\ms-python.debugpy-2025.16.0-win32-x64\bundled\
H AIPP LABS\ASSIGNMENT 18\TASK18.1.py'
1 ...
6
7
8
9
10
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> ^C
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> c;; cd 'c:\User
python.exe' 'c:\Users\ACER\vscode\extensions\ms-python.debugpy-2025.16.0-win32-x64\bundled\
H AIPP LABS\ASSIGNMENT 18\TASK18.2.py'
● The number is negative
The number is zero
The number is positive
○ PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> □

```

The screenshot shows a Java code editor with the file `TASK18.2.java`. The code defines a `Main` class with a `checkNumber` method that prints whether a given number is positive, negative, or zero. It also contains a `main` method that calls `checkNumber` for -5, 0, and 5. The output window shows the expected results: "The number is negative", "The number is zero", and "The number is positive".

```
1 public class Main {  
2     public static void checkNumber(int num) {  
3         if (num > 0)  
4             System.out.println("The number is positive");  
5         else if (num < 0)  
6             System.out.println("The number is negative");  
7         else  
8             System.out.println("The number is zero");  
9     }  
10    public static void main(String[] args) {  
11        checkNumber(-5);  
12        checkNumber(0);  
13        checkNumber(5);  
14    }  
15 }  
16  
17
```

Task 3:

Translate Recursive Function (Python → C++)

CODE:

The screenshot shows a Python code editor with three tabs: `TASK18.1.py`, `TASK18.2.py`, and `TASK18.3.py`. The `TASK18.3.py` tab is active, displaying a recursive factorial function. The function uses an if-else structure to return 1 for n=0 and n * factorial(n-1) for n > 0. It then prints the factorial of 5 and 0. Below the code editor is a terminal window showing the execution of the script. The terminal output shows the factorial of 5 being calculated as 120 and the factorial of 0 being 1.

```
C: > Users > ACER > OneDrive > Documents > MAHVISH M.TECH AIPP LABS > ASSIGNMENT 18 > TASK18.3.py > ...  
1 def factorial(n):  
2     if n == 0:  
3         return 1  
4     return n * factorial(n - 1)  
5  
6 print("Factorial =", factorial(5))  
7 print("Factorial =", factorial(0))  
8
```

TERMINAL

- PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> & 'c:\Python312 4\bundled\libs\debugpy\launcher' '62856' '--' 'C:\Users\ACER\OneDrive\Documents\MAHVISH M.TE Factorial = 120 Factorial = 1
- PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>

```

1 #include <iostream>
2 using namespace std;
3
4 int factorial(int n) {
5     if (n == 0) return 1;
6     return n * factorial(n - 1);
7 }
8
9 int main() {
10    cout << "Factorial = " << factorial(5) << endl;
11    cout << "Factorial = " << factorial(0) << endl;
12 }

```

Output:

```

Factorial = 120
Factorial = 1

```

Task 4:

Data Structures with Functions (JavaScript → Python)

CODE:

```

TASK18.1.py TASK18.2.py TASK18.3.py TASK18.4.py X
C: > Users > ACER > OneDrive > Documents > MAHVISH M.TECH AIPP LABS > ASSIGNMENT 18 > TASK18.4.py
1 def print_students(students):
2     print("Student List:")
3     for name in students:
4         print(name)
5
6 print_students(["Alice", "Bob", "Charlie"])
7

```

PROBLEMS OUTPUT TERMINAL PORTS

> TERMINAL

```

PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> & 'c:\Python4\bundle\libs\debugpy\launcher' '58692' '--' 'C:\Users\ACER\OneDrive\Documents\MAHVISH
Student List:
Alice
Bob
Charlie
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>

```

```

TASK18.js + 446xx8sxj
1 function printStudents(students) {
2     console.log("Student List:");
3     for (let name of students) {
4         console.log(name);
5     }
6 }
7
8 printStudents(["Alice", "Bob", "Charlie"]);
9

```

Output:

```

Student List:
Alice
Bob
Charlie

```

Task 5:

Class & Object Translation (Python → Java)

CODE:

The screenshot shows a code editor with multiple tabs at the top: TASK18.1.py, TASK18.2.py, TASK18.3.py, TASK18.4.py, and TASK18.5.py. The active tab is TASK18.5.py. The code is as follows:

```
C: > Users > ACER > OneDrive > Documents > MAHVISH M.TECH AIPP LABS > ASSIGNMENT 18 > TASK18.5.py > ...
1  class Car:
2      def __init__(self, brand, model, year):
3          self.brand = brand
4          self.model = model
5          self.year = year
6
7      def display_details(self):
8          print("Car Details:")
9          print("Brand:", self.brand)
10         print("Model:", self.model)
11         print("Year:", self.year)
12
13     car1 = Car("Toyota", "Corolla", 2020)
14     car1.display_details()
15
```

Below the code editor is a terminal window with the following output:

```
> TERMINAL
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> & 'c:\Python312\4\bundled\libs\debugpy\launcher' '63863' '--' 'C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18\MAIN.py'
Car Details:
Brand: Toyota
Model: Corolla
Year: 2020
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>
```

The screenshot shows a code editor with a Java file named MAIN.java. The code is as follows:

```
MAIN.java + 446xxgd4c
1 * class Car {
2     String brand, model;
3     int year;
4
5     Car(String brand, String model, int year) {
6         this.brand = brand;
7         this.model = model;
8         this.year = year;
9     }
10
11    void displayDetails() {
12        System.out.println("Car Details:");
13        System.out.println("Brand: " + brand);
14        System.out.println("Model: " + model);
15        System.out.println("Year: " + year);
16    }
17 }
18
19 * public class MAIN{
20 *     public static void main(String[] args) {
21 *         Car c = new Car("Toyota", "Corolla", 2020);
22 *         c.displayDetails();
23 *     }
24 }
```

On the right side of the editor, there is a terminal window showing the output of the Java program:

```
STDIN
Input for the program (Optional)

Output:
Car Details:
Brand: Toyota
Model: Corolla
Year: 2020
```