

# AIPP LAB 18

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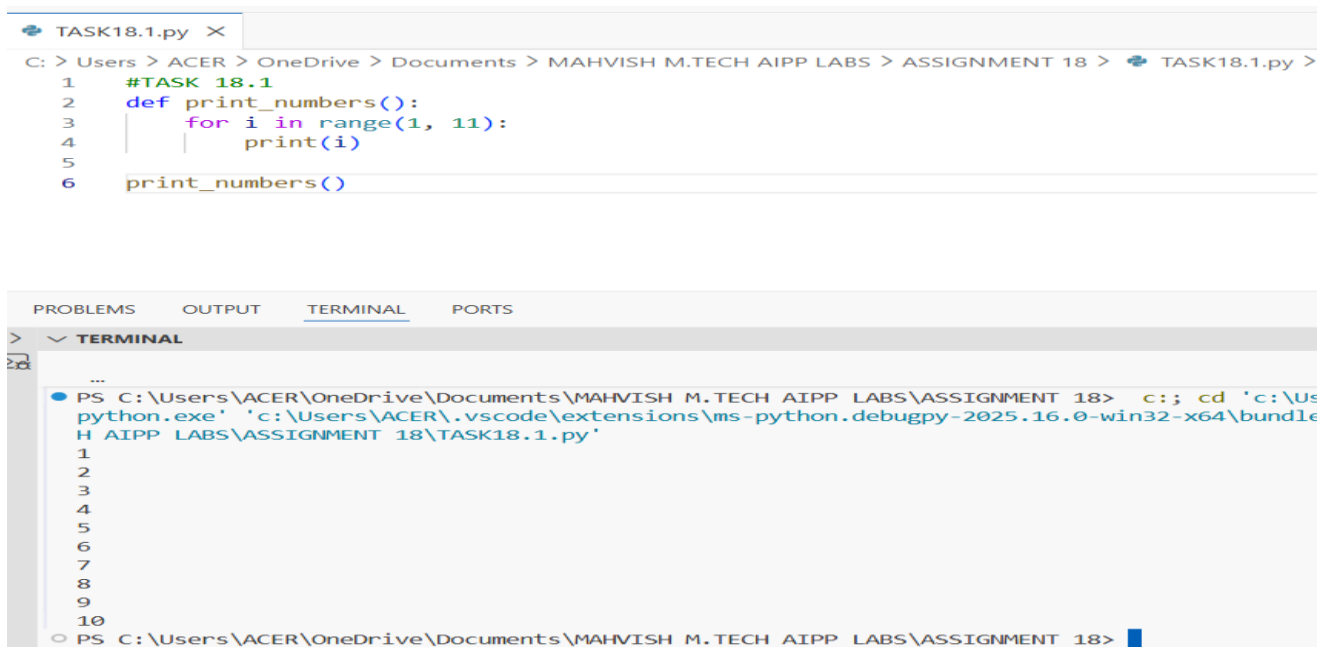
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**Completed this Assignment using VS – Gemini AI Integration.**

## Task 1:

**Translate a Simple Program (Python → JavaScript)**

***CODE:***



The image shows a screenshot of the Visual Studio Code (VS Code) interface. The top part displays the editor window with a file named `TASK18.1.py`. The code inside is a simple Python program that prints numbers from 1 to 10. The bottom part shows the terminal window with the command to run the Python file using the `python.exe` interpreter.

```
TASK18.1.py X
C: > Users > ACER > OneDrive > Documents > MAHVISH M.TECH AIPP LABS > ASSIGNMENT 18 > TASK18.1.py >
1  #TASK 18.1
2  def print_numbers():
3      for i in range(1, 11):
4          print(i)
5
6  print_numbers()

PROBLEMS OUTPUT TERMINAL PORTS
> ▼ TERMINAL
...
● PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18> c:; cd 'c:\Us
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 &lt;= 10; i++) { 3     console.log(i); 4   } 5 } 6 7 printNumbers(); 8</pre>		<pre>1 2 3 4 5 6 7 8 9 10  === Code Execution Successful ===</pre>

## Task 2:

## Convert Conditional Statements (Java → Python)

### *CODE:*

```
TASK18.1.py × TASK18.2.py ×  
C: > Users > ACER > OneDrive > Documents > MAHVISH M.TECH AIPP LABS > ASSIGNMENT 18 > TASK18.2.py > ...  
1 #TASK 18.2  
2 def check_number(num):  
3     if num > 0:  
4         print("The number is positive")  
5     elif num < 0:  
6         print("The number is negative")  
7     else:  
8         print("The number is zero")  
9  
10 check_number(-5)  
11 check_number(0)  
12 check_number(7)  
13
```

PROBLEMS	OUTPUT	TERMINAL	PORTS
		<pre>&gt; TERMINAL PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18&gt; ^C PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18&gt; 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&gt; ^C PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18&gt; 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&gt;</pre>	

```
TASK18.2.java 446xwub6z AI NEW JAVA RUN
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
11     public static void main(String[] args) {
12         checkNumber(-5);
13         checkNumber(0);
14         checkNumber(7);
15     }
16 }
17
```

STDIN

Input for the program (Optional)

Output:

The number is negative  
The number is zero  
The number is positive

## Task 3:

## Translate Recursive Function (Python → C++)

### *CODE:*

```
TASK18.1.py TASK18.2.py TASK18.3.py
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
```

PROBLEMS OUTPUT TERMINAL PORTS

> **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.TECH AIPP LABS\ASSIGNMENT 18\TASK18.3.py'

Factorial = 120  
Factorial = 1

PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>

```
TASK18.3.cpp 446xx36g8
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 }
```

STDIN

Input for the program (Optional)

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:\Python310\python.exe' 'c:\Python310\scripts\debugpy_launcher.py' '58692' '--' 'C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18\TASK18.4.py'
Student List:
Alice
Bob
Charlie
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>
```

```
TASK18.4.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
```

STDIN

Input for the program (Optional)

Output:

Student List:  
Alice  
Bob  
Charlie

## Task 5:

## Class & Object Translation (Python → Java)

## CODE:

```
TASK18.1.py X TASK18.2.py TASK18.3.py TASK18.4.py TASK18.5.py X
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
```

PROBLEMS OUTPUT TERMINAL PORTS

> **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
Car Details:
Brand: Toyota
Model: Corolla
Year: 2020
PS C:\Users\ACER\OneDrive\Documents\MAHVISH M.TECH AIPP LABS\ASSIGNMENT 18>
```

```
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 }
25
```

STDIN

Input for the program (Optional)

Output:

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