

AI Project 1 - Reeya Gupta

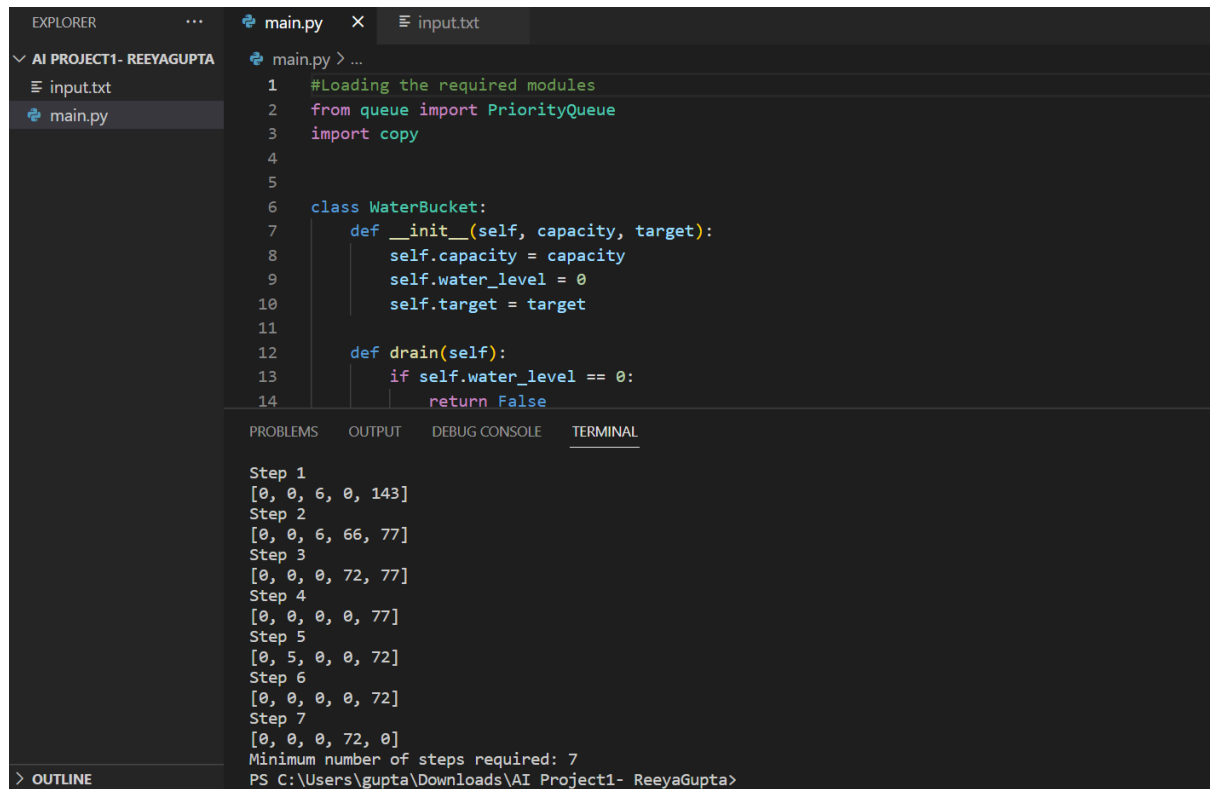
Output Document

Output 1:

Input:

2,5,6,72

143



The screenshot shows a VS Code editor with a file named `main.py` open. The code defines a `WaterBucket` class with an `__init__` method and a `drain` method. The `drain` method checks if the `water_level` is 0 and returns `False` if so. Below the code, the `TERMINAL` tab shows the execution output, which lists 7 steps and the minimum number of steps required (7). The output is as follows:

```
Step 1
[0, 0, 6, 0, 143]
Step 2
[0, 0, 6, 66, 77]
Step 3
[0, 0, 0, 72, 77]
Step 4
[0, 0, 0, 0, 77]
Step 5
[0, 5, 0, 0, 72]
Step 6
[0, 0, 0, 0, 72]
Step 7
[0, 0, 0, 72, 0]
Minimum number of steps required: 7
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta>
```

Output 2:

Input:

2,3,5,19,121,852

11443

```
EXPLORER  ...  main.py  X  input.txt
└─ AI PROJECT1- REEYAGUPTA
   ├── input.txt
   └─ main.py

main.py > ...
295     targ_input = int(targ_input)
296     li_values = list(string_input.split(","))
297     li_values = [int(i) for i in li_values]
298     li_values.sort()
299     problem = {
300         "size": li_values,
301         "target": targ_input
302     }
303     player = MyPlayer()
304     steps = player.run_algorithm(problem)
305     print(f"Minimum number of steps required: {steps}")

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
Step 30
[0, 0, 0, 0, 0, 852, 2556]
Step 31
[0, 0, 0, 0, 0, 0, 2556]
Step 32
[0, 0, 0, 0, 0, 852, 1704]
Step 33
[0, 0, 0, 0, 0, 0, 1704]
Step 34
[0, 0, 0, 0, 0, 852, 852]
Step 35
[0, 0, 0, 0, 0, 0, 852]
Step 36
[0, 0, 0, 0, 0, 852, 0]
Minimum number of steps required: 36
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta>
```

Output 3:

Input:

2

143

```
EXPLORER  ...  main.py  X  input.txt
└─ AI PROJECT1- REEYAGUPTA
   ├── input.txt
   └─ main.py

main.py > ...
295     targ_input = int(targ_input)
296     li_values = list(string_input.split(","))
297     li_values = [int(i) for i in li_values]
298     li_values.sort()
299     problem = {
300         "size": li_values,
301         "target": targ_input
302     }
303     player = MyPlayer()
304     steps = player.run_algorithm(problem)
305     print(f"Minimum number of steps required: {steps}")

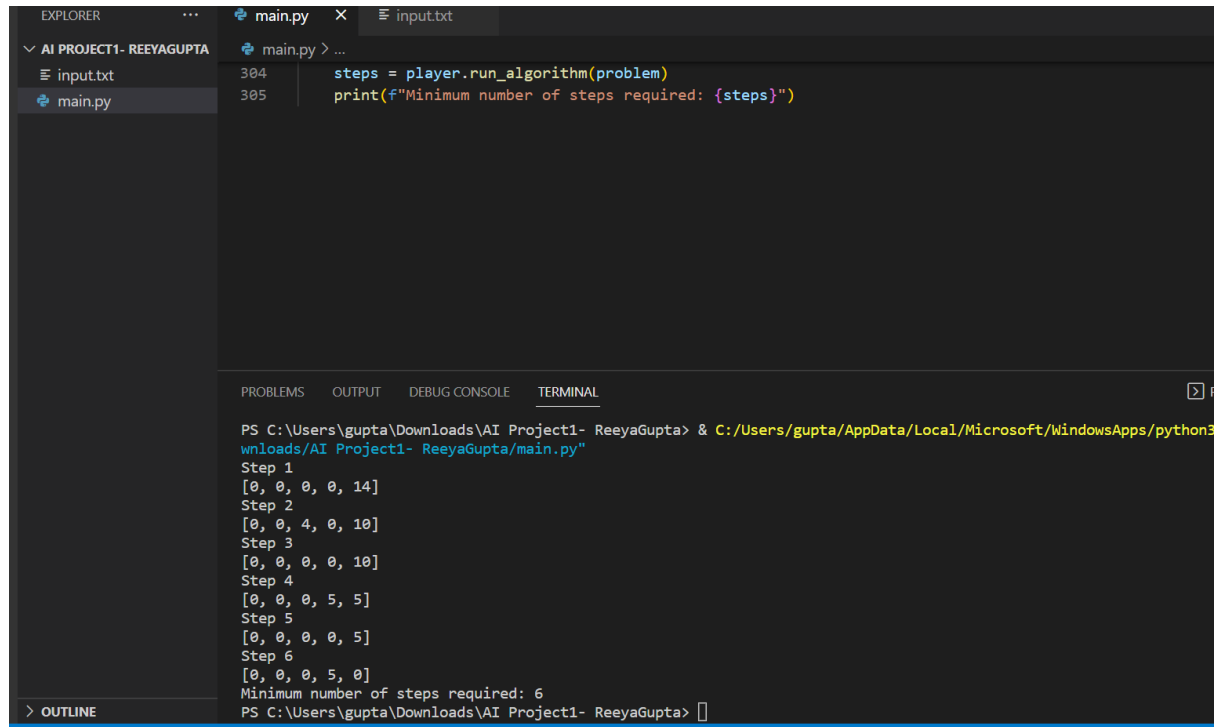
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta> & C:/Users/gupta/AppData/Local/Microsoft/Windows/Temp/143/143.exe
Minimum number of steps required: -1
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta>
```

Output 4:

Input:

2,4,5,1

14



The screenshot shows a Visual Studio Code editor with a project named "AI PROJECT1- REEYAGUPTA". The Explorer sidebar on the left shows files "input.txt" and "main.py". The main editor window displays the code in "main.py":

```
304 steps = player.run_algorithm(problem)
305 print(f"Minimum number of steps required: {steps}")
```

Below the code editor is the TERMINAL panel, which shows the execution output:

```
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta> & C:/Users/gupta/AppData/Local/Microsoft/WindowsApps/python3
wnloads/AI Project1- ReeyaGupta/main.py"
Step 1
[0, 0, 0, 0, 14]
Step 2
[0, 0, 4, 0, 10]
Step 3
[0, 0, 0, 0, 10]
Step 4
[0, 0, 0, 5, 5]
Step 5
[0, 0, 0, 0, 5]
Step 6
[0, 0, 0, 5, 0]
Minimum number of steps required: 6
PS C:\Users\gupta\Downloads\AI Project1- ReeyaGupta>
```