PROBLEM 1:

TEST CASE 1:

```
    /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
  Enter elements of the first sorted subarray (space-separated):
  Enter elements of the second sorted subarray (space-separated): 3 7 9

  Merged Sorted Array
  [3, 7, 9]
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 2:

```
    /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
  Enter elements of the first sorted subarray (space-separated): 2 7 9
  Enter elements of the second sorted subarray (space-separated): 1

  Merged Sorted Array
  [1, 2, 7, 9]
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 3:

```
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
  Enter elements of the first sorted subarray (space-separated): 1 7 10 15
  Enter elements of the second sorted subarray (space-separated): 3 8 12 18

  Merged Sorted Array
  [1, 3, 7, 8, 10, 12, 15, 18]
```

TEST CASE 4:

```
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Array.py"
  Enter elements of the first sorted subarray (space-separated): 1 3 5 5 15 18 21
  Enter elements of the second sorted subarray (space-separated): 5 5 6 8 10 12 16 17 17 20 25 28

  Merged Sorted Array
  [1, 3, 5, 5, 5, 5, 6, 8, 10, 12, 15, 16, 17, 17, 18, 20, 21, 25, 28]
```

PROBLEM 2:
ALACARTE MULTIPLICATION

TEST CASE 1:

```
    /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
    n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  51058000
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 2:

```
    /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
    n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  125959625
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 3:

```
PROBLEMS    OUTPUT    TERMINAL    ···    >_ Python  + ∨  ☐  🗑  ···  ∧

  /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
  n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  -46763892
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 4:

```
  /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
  n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  -6995719724161249737504
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 5:

```
  /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
  n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  453342363910464963439709345050504343098160
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 6:

```
  /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
  n/Proj1AlaCarteMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1AlaCart
  eMultiplication.py"
  453342363910464963439709345050504343098160
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

RECTANGLE MULTIPLICATION

TEST CASE 1:

```
  /usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
  n/Proj1RectangleMultiplication.py"
● surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
  /python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
  leMultiplication.py"
  51058000
○ surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 2:

```
/usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
n/Proj1RectangleMultiplication.py"
surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
leMultiplication.py"
125959625
surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 3:

```
/usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
n/Proj1RectangleMultiplication.py"
surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
leMultiplication.py"
-46763892
surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 4:

```
/usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
n/Proj1RectangleMultiplication.py"
surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
leMultiplication.py"
-699571972416124973504
surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 5:

```
/usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
n/Proj1RectangleMultiplication.py"
surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
leMultiplication.py"
45334236391046496343970934505043430981 60
surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```

TEST CASE 6:

```
/usr/local/bin/python3 "/Users/surabhiraghavan/Desktop/Algo Desig
n/Proj1RectangleMultiplication.py"
surabhiraghavan@Surabhis-MacBook-Pro Algo Design % /usr/local/bin
/python3 "/Users/surabhiraghavan/Desktop/Algo Design/Proj1Rectang
leMultiplication.py"
45334236391046496343970934505043430981 60
surabhiraghavan@Surabhis-MacBook-Pro Algo Design %
```