Programming Fundamentals

Assignment No.3

Outputs

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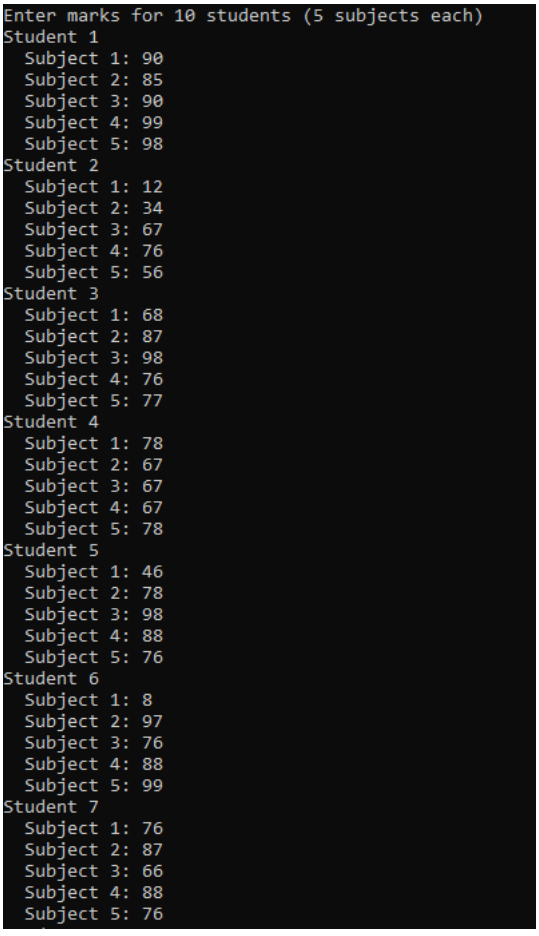
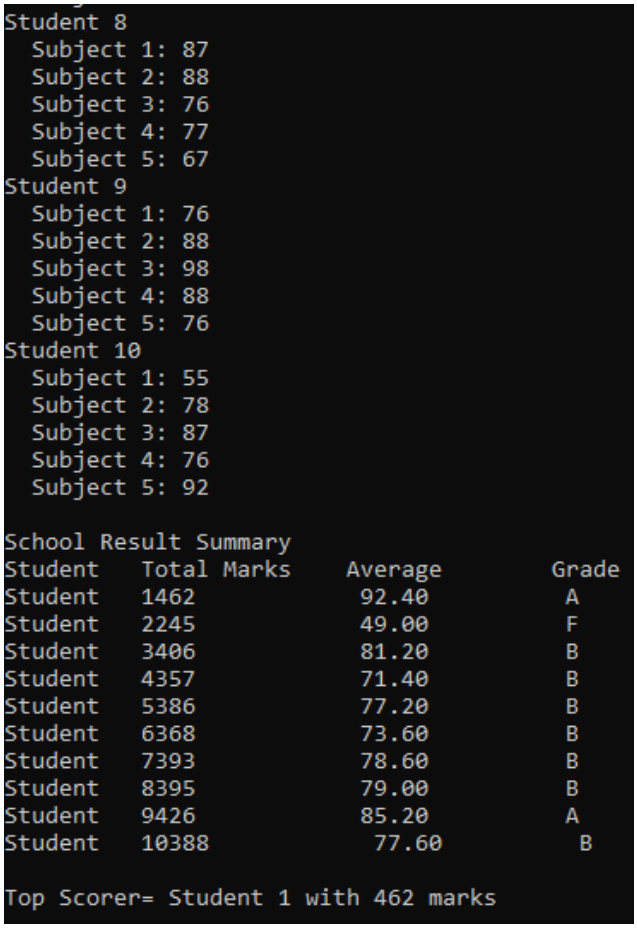
Section: B2

Output No.1

School Result Processing System:



```
Enter marks for 10 students (5 subjects each)
Student 1
  Subject 1: 90
  Subject 2: 85
  Subject 3: 90
  Subject 4: 99
  Subject 5: 98
Student 2
  Subject 1: 12
  Subject 2: 34
  Subject 3: 67
  Subject 4: 76
  Subject 5: 56
Student 3
  Subject 1: 68
  Subject 2: 87
  Subject 3: 98
  Subject 4: 76
  Subject 5: 77
Student 4
  Subject 1: 78
  Subject 2: 67
  Subject 3: 67
  Subject 4: 67
  Subject 5: 78
Student 5
  Subject 1: 46
  Subject 2: 78
  Subject 3: 98
  Subject 4: 88
  Subject 5: 76
Student 6
  Subject 1: 8
  Subject 2: 97
  Subject 3: 76
  Subject 4: 88
  Subject 5: 99
Student 7
  Subject 1: 76
  Subject 2: 87
  Subject 3: 66
  Subject 4: 88
  Subject 5: 76
```



```
Student 8
  Subject 1: 87
  Subject 2: 88
  Subject 3: 76
  Subject 4: 77
  Subject 5: 67
Student 9
  Subject 1: 76
  Subject 2: 88
  Subject 3: 98
  Subject 4: 88
  Subject 5: 76
Student 10
  Subject 1: 55
  Subject 2: 78
  Subject 3: 87
  Subject 4: 76
  Subject 5: 92

School Result Summary
Student    Total Marks    Average        Grade
Student    1462            92.40          A
Student    2245            49.00          F
Student    3406            81.20          B
Student    4357            71.40          B
Student    5386            77.20          B
Student    6368            73.60          B
Student    7393            78.60          B
Student    8395            79.00          B
Student    9426            85.20          A
Student    10388            77.60          B

Top Scorer= Student 1 with 462 marks
```

Output No.2

Restaurant Sales Tracker:

```
        ENTER SALES DATA
Enter sales for Item 1 on Day 1: 65
Enter sales for Item 1 on Day 2: 56
Enter sales for Item 1 on Day 3: 4
Enter sales for Item 1 on Day 4: 34
Enter sales for Item 1 on Day 5: 67
Enter sales for Item 1 on Day 6: 55
Enter sales for Item 1 on Day 7: 43
Enter sales for Item 2 on Day 1: 23
Enter sales for Item 2 on Day 2: 45
Enter sales for Item 2 on Day 3: 4
Enter sales for Item 2 on Day 4: 35
Enter sales for Item 2 on Day 5: 67
Enter sales for Item 2 on Day 6: 65
Enter sales for Item 2 on Day 7: 78
Enter sales for Item 3 on Day 1: 76
Enter sales for Item 3 on Day 2: 45
Enter sales for Item 3 on Day 3: 67
Enter sales for Item 3 on Day 4: 54
Enter sales for Item 3 on Day 5: 33
Enter sales for Item 3 on Day 6: 45
Enter sales for Item 3 on Day 7: 67
Enter sales for Item 4 on Day 1: 76
Enter sales for Item 4 on Day 2: 54
Enter sales for Item 4 on Day 3: 44
Enter sales for Item 4 on Day 4: 67
Enter sales for Item 4 on Day 5: 43
Enter sales for Item 4 on Day 6: 21
Enter sales for Item 4 on Day 7: 33

        TOTAL SALES PER ITEM
Item 1= 324.00
Item 2= 317.00
Item 3= 387.00
Item 4= 338.00

        TOTAL SALES PER DAY
Day 1= 240.00
Day 2= 200.00
Day 3= 119.00
Day 4= 190.00
Day 5= 210.00
Day 6= 186.00
Day 7= 221.00

        HIGHEST SALES DAY
Day 1 had the highest sales= 240.00

        TOP SELLING ITEM        Item 3 was sold the most with total sales= 387.00
```

Output No.3

Hospital Patient Record System:

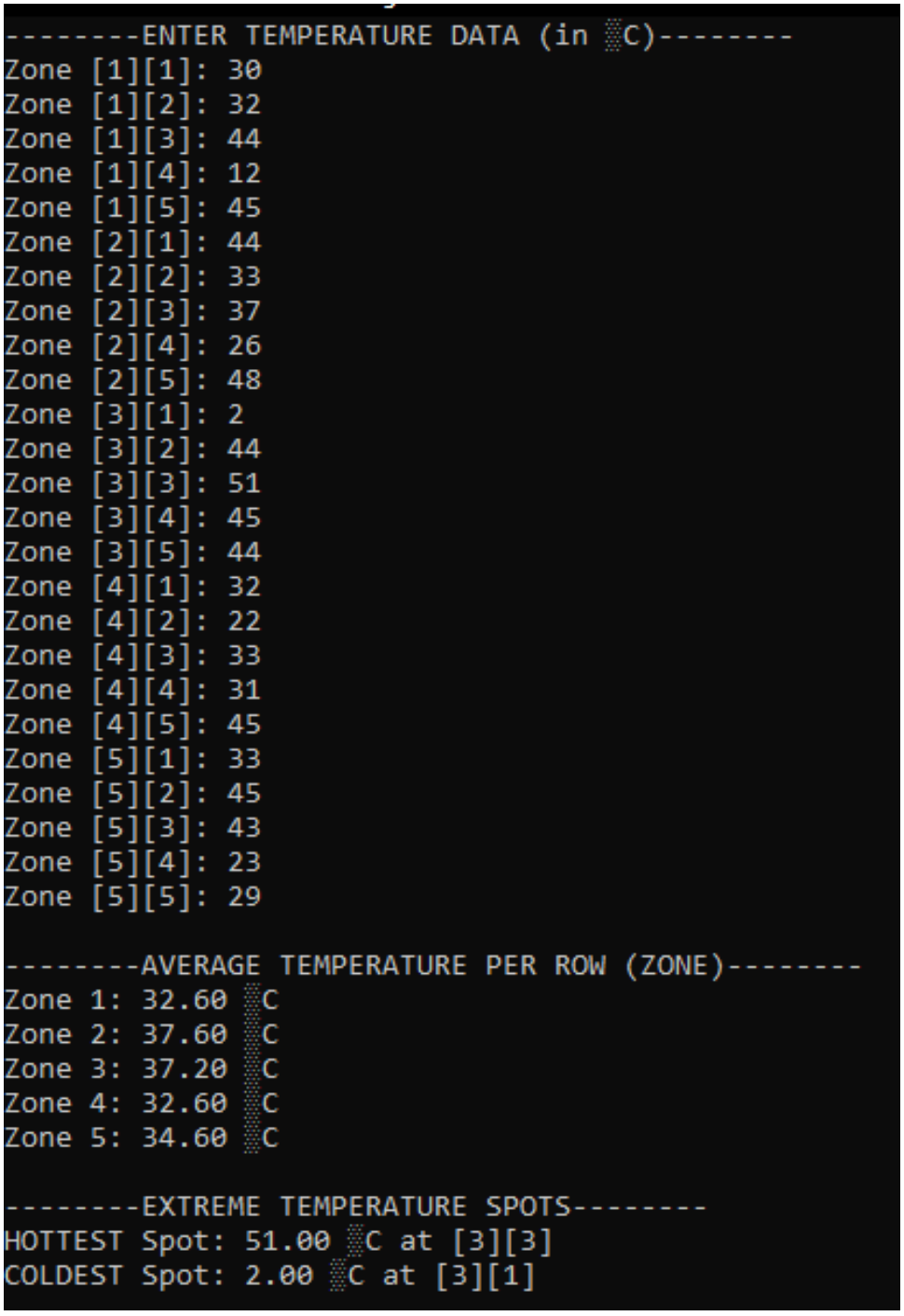
```
-------ENTER PATIENT STATUS DATA-------
Use ONLY uppercase letters: 'S' (Stable)
'C' (Critical)
'R' (Recovered)
Patient 1, Day 1: S
Patient 1, Day 2: C
Patient 1, Day 3: R
Patient 1, Day 4: S
Patient 1, Day 5: C
Patient 1, Day 6: C
Patient 1, Day 7: R
Patient 2, Day 1: S
Patient 2, Day 2: S
Patient 2, Day 3: S
Patient 2, Day 4: S
Patient 2, Day 5: S
Patient 2, Day 6: S
Patient 2, Day 7: R
Patient 3, Day 1: R
Patient 3, Day 2: R
Patient 3, Day 3: R
Patient 3, Day 4: R
Patient 3, Day 5: C
Patient 3, Day 6: C
Patient 3, Day 7: C
Patient 4, Day 1: C
Patient 4, Day 2: C
Patient 4, Day 3: S
Patient 4, Day 4: S
Patient 4, Day 5: R
Patient 4, Day 6: R
Patient 4, Day 7: R
Patient 5, Day 1: S
Patient 5, Day 2: S
Patient 5, Day 3: S
Patient 5, Day 4: S
Patient 5, Day 5: S
Patient 5, Day 6: C
Patient 5, Day 7: C

--------STATUS COUNTS (ALL PATIENTS & DAYS)--------
Stable (S)= 15
Critical (C)= 10
Recovered (R)= 10

--------DAYS IN CRITICAL STATE PER PATIENT--------
Patient 1: 3 day(s) in critical state
Patient 2: 0 day(s) in critical state
Patient 3: 3 day(s) in critical state
Patient 4: 2 day(s) in critical state
Patient 5: 2 day(s) in critical state
```

Output No.4

Temperature Monitoring Grid:



Output No.5

Quiz Competition Scoreboard:

```
--------ENTER SCORES FOR EACH TEAM AND ROUND--------
Team 1 scores:
  Round 1: 10
  Round 2: 10
  Round 3: 10
  Round 4: 9
Team 2 scores:
  Round 1: 10
  Round 2: 10
  Round 3: 9
  Round 4: 9
Team 3 scores:
  Round 1: 6
  Round 2: 7
  Round 3: 8
  Round 4: 9
Team 4 scores:
  Round 1: 1
  Round 2: 2
  Round 3: 3
  Round 4: 4
Team 5 scores:
  Round 1: 5
  Round 2: 6
  Round 3: 7
  Round 4: 8
Team 6 scores:
  Round 1: 4
  Round 2: 4
  Round 3: 4
  Round 4: 1

--------TOTAL SCORES PER TEAM--------
Team 1: 39
Team 2: 38
Team 3: 30
Team 4: 10
Team 5: 26
Team 6: 13

--------WINNER & RUNNER-UP--------
Winner: Team 1 with 39 points
Runner-up: Team 2 with 38 points

--------TEAMS WITH ANY ROUND SCORE <= 10--------
Team 1
Team 2
Team 3
Team 4
Team 5
Team 6
```

Output No.6

Flight Seat Reservation System:

```
--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 2
Enter row (1-6) and column (1-4) to book: 1 2
Seat successfully booked!

--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 2
Enter row (1-6) and column (1-4) to book: 3 3
Seat successfully booked!

--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 1

--------SEATING CHART--------
Row 1: E B E E
Row 2: E E E E
Row 3: E E B E
Row 4: E E E E
Row 5: E E E E
Row 6: E E E E

--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 3
Available seats: 22

--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 4
Row with maximum empty seats: 2

--------FLIGHT SEAT RESERVATION MENU--------
1. Display Seating Chart
2. Book a Seat
3. Count Available Seats
4. Row with Maximum Empty Seats
0. Exit
Enter your choice: 0
Exiting program
```

Output No.7

Product Rating Dashboard:

```
Enter ratings (1 to 5) for 5 products by 10 users:
Product 1:
  User 1: 5
  User 2: 5
  User 3: 5
  User 4: 5
  User 5: 5
  User 6: 55
  Invalid. Enter a rating between 1 and 5.
  User 6: 5
  User 7: 5
  User 8: 5
  User 9: 5
  User 10: 5
Product 2:
  User 1: 2
  User 2: 2
  User 3: 2
  User 4: 2
  User 5: 2
  User 6: 2
  User 7: 3
  User 8: 3
  User 9: 3
  User 10: 3
Product 3:
  User 1: 4
  User 2:
4
  User 3: 4
  User 4: 4
  User 5: 4
  User 6: 4
  User 7: 4
  User 8: 4
  User 9: 1
  User 10: 1
Product 4:
  User 1: 1
  User 2: 1
  User 3: 1
  User 4: 1
  User 5: 1
  User 6: 1
  User 7: 2
  User 8: 2
  User 9: 2
  User 10: 2
Product 5:
  User 1: 3
  User 2: 3
  User 3: 3
  User 4: 33
  Invalid. Enter a rating between 1 and 5.
  User 4: 3
  User 5: 3
  User 6: 3
  User 7: 3
  User 8: 3
  User 9: 3
  User 10: 4

--------Product Rating Dashboard--------
Product 1 -> Avg Rating: 5, Perfect Ratings: 10
Product 2 -> Avg Rating: 2.4, Perfect Ratings: 0
Product 3 -> Avg Rating: 3.4, Perfect Ratings: 0
Product 4 -> Avg Rating: 1.4, Perfect Ratings: 0
Product 5 -> Avg Rating: 3.1, Perfect Ratings: 0

Product(s) with the worst average rating (1.4):
  Product 4
```

Output No.8

Library Book Availability Tracker:

```
Enter status for each book (A = Available, I = Issued, M = Missing):
Shelf 1:
  Book 1: A
  Book 2: A
  Book 3: A
  Book 4: I
  Book 5: I
Shelf 2:
  Book 1: I
  Book 2: I
  Book 3: M
  Book 4: M
  Book 5: M
Shelf 3:
  Book 1: A
  Book 2: A
  Book 3: A
  Book 4: I
  Book 5: I
Shelf 4:
  Book 1: I
  Book 2: A
  Book 3: A
  Book 4: A
  Book 5: M
Shelf 5:
  Book 1: M
  Book 2: M
  Book 3: M
  Book 4: A
  Book 5: A

--------Library Book Status--------
Shelf 1: A A A I I
Shelf 2: I I M M M
Shelf 3: A A A I I
Shelf 4: I A A A M
Shelf 5: M M M A A

Total Available Books: 11
Total Issued Books: 7
Total Missing Books: 7

Shelf(s) with the highest missing books (3):
  Shelf 2
  Shelf 5
```

Output No.9

Factory Quality Control Analysis:

```
Enter defect percentage for each shift over 7 days:
Shift 1:
  Day 1: 66
  Day 2: 67
  Day 3: 54
  Day 4: 33
  Day 5: 89
  Day 6: 87
  Day 7: 66
Shift 2:
  Day 1: 45
  Day 2: 67
  Day 3: 54
  Day 4: 32
  Day 5: 12
  Day 6: 99
  Day 7: 81
Shift 3:
  Day 1: 19
  Day 2: 49
  Day 3: 58
  Day 4: 83
  Day 5: 76
  Day 6: 46
  Day 7: 39

Average Defects Per Shift:
  Shift 1: 66%
  Shift 2: 55.7143%
  Shift 3: 52.8571%

Average Defects Per Day:  Day 1: 43.3333%
  Day 2: 61%
  Day 3: 55.3333%
  Day 4: 49.3333%
  Day 5: 59%
  Day 6: 77.3333%
  Day 7: 62%

Critical Shifts (avg defects > 10%):
  Shift 1 with 66% defects
  Shift 2 with 55.7143% defects
  Shift 3 with 52.8571% defects
```

Output No.10

Election Result Matrix:

```
Enter votes for 4 candidates from 6 polling stations:
Polling Station 1:
  Candidate 1: 10
  Candidate 2: 10
  Candidate 3: 10
  Candidate 4: 9
Polling Station 2:
  Candidate 1: 10
  Candidate 2: 9
  Candidate 3: 8
  Candidate 4: 7
Polling Station 3:
  Candidate 1: 6
  Candidate 2: 7
  Candidate 3: 8
  Candidate 4: 2
Polling Station 4:
  Candidate 1: 1
  Candidate 2: 2
  Candidate 3: 3
  Candidate 4: 4
Polling Station 5:
  Candidate 1: 5
  Candidate 2: 6
  Candidate 3: 7
  Candidate 4: 8
Polling Station 6:
  Candidate 1: 10
  Candidate 2: 9
  Candidate 3: 8
  Candidate 4: 10

Total Votes Per Candidate:
  Candidate 1: 42 votes
  Candidate 2: 43 votes
  Candidate 3: 44 votes
  Candidate 4: 40 votes

Total Votes Per Polling Station:
  Station 1: 39 votes
  Station 2: 34 votes
  Station 3: 23 votes
  Station 4: 10 votes
  Station 5: 26 votes
  Station 6: 37 votes

Winner(s) with 44 votes:
  Candidate 3

Polling Station(s) with voter turnout < 100:
  Station 1 (Total votes: 39)
  Station 2 (Total votes: 34)
  Station 3 (Total votes: 23)
  Station 4 (Total votes: 10)
  Station 5 (Total votes: 26)
  Station 6 (Total votes: 37)
```