C PROGRAMMING OUTPUTS

Q1_1:

```
Yash Kumar , 125113026
enter a number:77267
77267 is an odd integer%
```

Q1_2:

```
Yash Kumar , 125113026
Enter three integers: 56,878,64
Largest = 56
```

Q1_3:

```
Yash Kumar,125113026
enter a year:2045
2045 is not a leap year%
```

Q1_4:

```
Yash Kumar,125113026
enter the number:30
the sum of first 30 natural number is 465%
```

Q1_5:

```
Yash Kumar,125113026
Enter the number: 8
8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
```

Q1_6:

```
Yash Kumar,125113026
Enter the number: 479
Reversed number = 974
```

Q1_7:

```
Yash Kumar,125113026
Enter the numbers:34 67
MENU:1.ADDITION
2.SUBTRACTION
3.MULTIPLY
4.DIVISION
Enter the choice(1-4):1
result=101.00
```

Q1_8:

```
Yash Kumar,125113026
enter the number:7
the factorial of 7 is:5040%
```

Q1_9:

```
Yash Kumar,125113026
Enter an integer: 35791
35791 is not a palindrome
```

Q2_1:

```
Yash Kumar,125113026
Enter the number of elements in the array: 4
Enter 4 elements:
45 67 38 97
Largest element = 97
```

Q2_2:

```
Yash Kumar,125113026
enter the number of elements:4
enter the number:34
enter the number:54
enter the number:65
enter the number:67
the sum of 4 numbers is :220.00
the average of 4 numbers is :55.00%
```

Q2_3:

```
Yash Kumar, 125113026
Sorted array: 1 3 4 5 7 9 %
```

Q2_4:

```
Yash Kumar, 125113026
Element frequencies:
Element 1: 1 times
Element 3: 2 times
Element 4: 1 times
Element 5: 3 times
Element 7: 2 times
Element 9: 2 times
```

Q2_5:

```
Yash Kumar, 125113026
Merged array: 1 3 5 7 2 4 6 8 %
```

Q2_6:

```
Yash Kumar , 125113026
Enter the number of rows:2
Enter the number of columns:3
Enter elements of a:2 3 4 5 6 7
Enter elements of b:9 5 3 7 2 1
the sum of two matrices is:11 8 7 12 8 8 %
```

Q2_7:

```
Yash Kumar, 125113026
Enter the number of rows: 2
Enter the number of columns: 3
Enter elements of the matrix:
2 4 6 8 3 9
Transpose of the matrix:
2 8
4 3
6 9
```

Q2_8:

```
Yash Kumar, 125113026
Enter the size of the square matrix: 2
Enter the elements of the matrix:
3 6 8 5
Sum of main diagonal elements: 8
Sum of secondary diagonal elements: 14
```

Q3_1:

```
Yash Kumar, 125113026
Enter name: Yash
Enter roll number: 26
Enter marks: 99
Name: Yash
Roll Number: 26
Marks: 99.00
```

Q3_2:

```
Yash Kumar, 125113026
Enter name of student 1: Nitesh
Enter marks of student 1: 96
Enter name of student 2: Vivek
Enter marks of student 2: 99
Enter name of student 3: Aayush
Enter marks of student 3: 100
Top student: Aayush with marks 100
```

Q3_3:

```
Yash Kumar, 125113026
Books priced above 500:
Title: 1984, Author: George Orwell, Price: 550.00
Title: To Kill a Mockingbird, Author: Harper Lee, Price: 600.00
Title: Moby Dick, Author: Herman Melville, Price: 750.00
```

Q3_4:

```
Yash Kumar, 125113026
Enter the number of students: 3
Enter name of student 1: Yash
Enter marks of student 1: 99
Enter name of student 2: Nitesh
Enter marks of student 2: 98
Enter name of student 3: Yogender
Enter marks of student 3: 100
Average marks of 3 students: 99.00
```

Q3_5:

```
 Yash Kumar, 125113026
 Enter employee name: Nitesh
 Enter basic salary: 60000
 Enter DA: 30000
 Enter HRA: 10000
 Gross Salary of Nitesh
 :100000.00
```

Q3_6:

```
 Yash Kumar, 125113026
 Enter employee name: Nitesh
 Enter employee ID: 458853238
 Enter employee salary: 100000
 Employee Details:
 Name: Nitesh
 ID: 458853238
 Salary: 100000.00
```

Q3_7:

```
 Yash Kumar, 125113026
 Enter name of student 1: Vivek
 Enter date of birth (dd mm yyyy) of student 1: 27 06 2006
 Enter name of student 2: Nitesh
 Enter date of birth (dd mm yyyy) of student 2: 24 12 2005
 Enter name of student 3: Aayush
 Enter date of birth (dd mm yyyy) of student 3: 12 03 2007

 Student Details:
 Name: Vivek, DOB: 27/06/2006,
 Name: Nitesh, DOB: 24/12/2005,
 Name: Aayush, DOB: 12/03/2007,
```

Q3_8:

```
 Yash Kumar, 125113026
 Enter number of students: 2
 Enter details for student 1:
 Roll Number: 125113016
 Name: Nitesh
 Marks: 97
 Enter details for student 2:
 Roll Number: 125114067
 Name: Aayush
 Marks: 99

 Sorted Student Records by Roll Number:
 Roll No: 125113016, Name: Nitesh, Marks: 97.00
 Roll No: 125114067, Name: Aayush, Marks: 99.00
```

Q4_1:

```
Yash Kumar, 125113026
Enter first number: 45
Enter second number: 79
Before swapping: num1 = 45, num2 = 79
After swapping: num1 = 79, num2 = 45
```

Q4_2:

```
Yash Kumar, 125113026
Enter array elements : 2
3
5
6
6
4
3
24
5
6
Sum of array elements = 64
```

Q4_3:

```
Yash Kumar, 125113026
Enter a string: Hello i am a good boy
Length of the string: 21
```

Q4_4:

```
Yash Kumar, 125113026
Enter a string: My name is yash
Copied string: My name is yash
```

Q4_5:

```
Yash Kumar, 125113026
Before: Alice -> 82
After p->marks = 90: Alice -> 90
After (*p).marks = 88: Alice -> 88
Heap student: Bob -> 75
After add_marks(s2,5): Bob -> 80
```

Q4_6:

```
Yash Kumar, 125113026
Largest element = 9
Smallest element = 1
```

Q4_7:

```
Yash Kumar, 125113026
Array elements using pointer arithmetic:
10 20 30 40 50
```

Q4_8:

```
Yash Kumar, 125113026
Value of var: 42
Value via ptr: 42
Value via ptr_to_ptr: 42
New value of var after modification: 100
```

Q5_1:

```
Yash Kumar, 125113026
Enter a number: 58
58 is not a prime number.
```

Q5_2:

```
Yash Kumar, 125113026
Enter a positive integer: 5
Factorial of 5 is 120
```

Q5_3:

```
Yash Kumar, 125113026
Enter first number: 35
Enter second number: 91
GCD of 35 and 91 is 7
```

Q5_4:

```
Yash Kumar, 125113026
Enter an integer: 84
Reversed integer: 48
```

Q5_5:

```
Yash Kumar, 125113026
Enter a number: 28
Sum of digits: 10
```

Q5_6:

```
Yash Kumar, 125113026
Enter a string: 135797531
The string is a palindrome.
```

Q5_7:

```
Yash Kumar, 125113026
Enter number of rows (max 10): 2
Enter number of columns (max 10): 2
Enter elements of first matrix:
Enter element [0][0]: 3
Enter element [0][1]: 2
Enter element [1][0]: 5
Enter element [1][1]: 6
Enter elements of second matrix:
Enter element [0][0]: 8
Enter element [0][1]: 7
Enter element [1][0]: 4
Enter element [1][1]: 1
Resultant matrix after addition:
11 9
9 7
```

Q5_8:

```
Yash Kumar, 125113026
Enter the number of elements (max 100): 4
Enter 4 elements:
3 6 9 12
Average = 7.50
```

Q5_9:

```
Yash Kumar, 125113026
Enter first number (for call by value): 34
Enter second number (for call by reference): 60
Before function calls: num1 = 34, num2 = 60
After function calls: num1 = 34, num2 = 70
```

Q6_1:

```
Yash Kumar, 125113026
Enter the filename to create: student
Enter content to write to the file (max 500 characters):
student name is nitesh with roll number 125113025
Content written to student successfully.
```

Q6_2:

```
Yash Kumar, 125113026
Enter the filename to read: student
Content of student:
student name is nitesh with roll number 125113025
```

Q6_3:

```
Yash Kumar, 125113026
Enter the filename to analyze: student
Character count: 50
Word count: 8
Line count: 1
```

Q6_4:

```
Yash Kumar, 125113026
Enter the source filename: student
Enter the destination filename: info
Content copied from student to info successfully.
```

Q6_5:

```
Yash Kumar, 125113026
Enter the filename to append data: info
Enter content to append to the file (max 500 characters):
student name is yash with roll number 125113026
Content appended to info successfully.
```

Q6_6:

```
Yash Kumar, 125113026

Menu:
1. Add Student Record
2. Display Student Records
3. Exit
Enter your choice: 1
Enter student ID: 125113016
Enter student name: Nitesh
Enter student marks: 99
Student record added successfully.

Menu:
1. Add Student Record
2. Display Student Records
3. Exit
Enter your choice: 2
Student Records:
ID        Name      Marks
125113026         Yash     99.00
125113016         Nitesh  99.00

Menu:
1. Add Student Record
2. Display Student Records
3. Exit
Enter your choice: 3
```

Q6_7:

```
Yash Kumar, 125113026
Sum = 21.00
Average = 2.33
```

Q6_8:

```
Yash Kumar, 125113026
Enter the first filename: student
Enter the second filename: info
Enter the merged filename: details
Files student and info merged into details successfully.
```