

## Program 2:

```
Matrix Operations Menu:
1. Check Matrix Type
2. Find Transpose of the Matrix
3. Find Adjoint of the Matrix
4. Find Inverse of the Matrix
5. Multiply Two Matrices
6. Exit
Enter your choice: 1
Enter dimensions of matrix (rows and columns): 2
3
Enter elements of the matrix:
1
2
3
4
5
6
Order of the matrix is: 2 x 3
It is a rectangular matrix
The matrix will not posses properties like identity because it is not a square matrix

Matrix Operations Menu:
1. Check Matrix Type
2. Find Transpose of the Matrix
3. Find Adjoint of the Matrix
4. Find Inverse of the Matrix
5. Multiply Two Matrices
6. Exit
Enter your choice: 4
Enter dimensions of matrix (n x n): 2
Enter elements of the matrix:
1
2
3
4
Inverse of the matrix:
-2      1
1.5     -0.5

Matrix Operations Menu:
1. Check Matrix Type
2. Find Transpose of the Matrix
3. Find Adjoint of the Matrix
4. Find Inverse of the Matrix
5. Multiply Two Matrices
6. Exit
Enter your choice: 6
Exiting program. Goodbye!
```

Program 1:

Initial Family Details:

Amna: P  
Father: N  
Mother: P  
Sister: N  
Brother1: P  
Brother2: N  
Grandfather: N  
Grandmother: N  
Uncle: N  
Aunt: N

Sorted Family Details:

Amna: P  
Mother: P  
Brother1: P  
Sister: N  
Father: N  
Brother2: N  
Grandfather: N  
Grandmother: N  
Uncle: N  
Aunt: N

Iffat's House members:

Sister: N  
Father: N  
Brother2: N  
Grandfather: N  
Grandmother: N  
Uncle: N  
Aunt: N