# OUTPUT OF THE FOLLOWING PROGRAMS:

## 1. STABLE MARRIAGE PROBLEM:

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STABLE MARRIAGE PROBLEM

        PREFERENCE TABLE
MEN             WOMEN
0: c b d a      a: 0 1 3 2
1: b a c d      b: 2 0 3 1
2: c a d b      c: 2 1 3 0
3: c a d b      d: 1 0 2 3

SOLUTION:
Man     Woman
1        a
0        b
2        c
3        d
```

## 2. EUCLID'S ALGORITHM:

```
Enter the first number: 595
Enter the second number: 252
GCD ( 595  ,  252  ) =  7
>>>
```

## 3. MULTIPLICATIVE INVERSE:

```
Enter value of a(which will be with mod): 23
Enter value of b: 5
5  (mod  23 )
Multiplicative inverse:  14
Enter 1 to continue and 0 to exit: 1
Enter value of a(which will be with mod): 392
Enter value of b: 27
27  (mod  392 )
Multiplicative inverse:  363
Enter 1 to continue and 0 to exit: 0
```

# 4. PEGIONHOLE PRINCIPLE:

```
Select from the folllowing:
1. Find n(the number of pigeons)
2. Find m(the number of pigeonholes)
3. Find at least one pigeon is contained in a pigeonhole
Enter your choice: 1
Enter m (number of pigeonholes): 12
Enter the value: 5
Value of n=  49
>>>
```

```
Select from the folllowing:
1. Find n(the number of pigeons)
2. Find m(the number of pigeonholes)
3. Find at least one pigeon is contained in a pigeonhole
Enter your choice: 2
Ënter n (number of pegions): 49
Enter the value: 5
Value of m=  12
```

```
Select from the folllowing:
1. Find n(the number of pigeons)
2. Find m(the number of pigeonholes)
3. Find at least one pigeon is contained in a pigeonhole
Enter your choice: 3
Enter n (the number of pigeons): 61327
Enter m (the number of pigeonholes): 30
Value is:  2045
>>>
```