**Report File**

**K00220137**

**Mckinley Magale**

Question 1: Program to find the sum of all multiples of 3 and 5 below a specified value.

n=1,000: 234168

n=10,000: 23341668

n=25,000: 145854168

n=50,000: 583341668

Question 2: Program for the Prime Factorization of a Positive Integer.

n=30: [2,3,5]

n=31: [31]

n=487: [487]

n=8,893: [8893]

n=987,654,323: [987654323]

n=131,317,171,919: [19,19,101,3601579]

Question 3: Program to find the sum of all even Fibonacci numbers.

n=100,000: 196,418

n=1,000,000: 3,524,578

n=2,500,000: 3,524,578

n=5,000,000: 14,930,352

Question 4: Program for the Extended Euclidean Algorithm

i.)

1. a= 8,359 b= 4,962

GCD (8359,4962) = 1, x=1 , y=1

1. a= 95,243 b= 24,138

GCD (95243,24138) =1, x=1 , y=1