**Aleena Naeem Assignment 1**

**Question: 1 – Part A**

Enter distance(miles) greater that 0:100

Enter speed greater than 0(miles/hour):20

Time the route should take (in hours) is 0.2

**Question 1 – Part B**

Enter distance(miles):120

Enter speed(miles/hour):10

Time the route should take (in minutes) is 5

**Question 1 – Part C**

local time in hours is= 1.0

parkway time in hours is= 1.14

highway time in hours is= 1.15

**Local time is the least hence the local route is the fastest.**

**Question: 6 – Part A**

PartA

Please enter start value:1000

Please enter up value:1100

Please enter down value:975

Output:

Expected end value: 1037.5

Expected return in % =: 3.75

Risk equals: 62.5

**Question: 6 – Part B**

Partb

Calculated returns are: CashFund: 0.5 , BondFund: 1.0 , StockFund: 2.5

Highest return is: 2.5

Calculated risks are: CashFund: 5.0 , BondFund: 40.0 , StockFund: 75.0

Lowest risk is: 5.0

**Highest return is from Stock Fund while the Cash Fund has lowest risk.**

**Question: 8 – Part A**

Enter average arrival rate of customers per hour:400

Enter average service rate of ATM per hour:420

Average wait time per minute per customer is 2.86

Average number of customers in line is 19

**Question: 8 – Part B**

Average wait time per minute per customer at old ATM is 2.67

Average number of customers in line is 1

Average wait time per minute per customer at Fast ATM is 1.31

Average number of customers in line is 1

Average wait time per minute per customer at Faster ATM is 1.0

Average number of customers in line is 0