Smart Card System

```
FUNCTION user1():
    DISPLAY "Welcome Miss.Hasani Dilhari"
    currentbalance=600
    costCalculation(currentbalance)


FUNCTION user2():
    DISPLAY "Welcome Mr.Janindu Alwis"
    currentbalance=4562
    costCalculation(currentbalance)


FUNCTION user3():
    DISPLAY "Welcome Miss.Thamadie Goonawardhana"
    currentbalance=21
    costCalculation(currentbalance)


FUNCTION user4():
    DISPLAY "Welcome Miss.Sayagi Asogan"
    currentbalance=2127
    costCalculation(currentbalance)


FUNCTION user5():
    DISPLAY "Welcome Mr.Rusiru Fernando"
    currentbalance=2100
    costCalculation(currentbalance)


FUNCTION automatedTicketing():
    GET passengerID
    IF passengerID=="0001":
        user1()
    ELSE
            IF passengerID=="0002":
                    user2()
            ELSE
                    IF passengerID=="0003":
                            user3()
            ELSE
                            IF passengerID=="0004":
                                    user4()
                            ELSE
                                    IF passengerID=="0005":
                                            user5()
                                    ENDIF
                            ENDIF
                    ENDIF
            ENDIF
        ENDIF
```

```
FOR space = 1 to 100:
    DISPLAY "Welcome to the Railway Systems"
    automatedTicketing()
    cardstate=True
ELSE:
    DISPLAY "No seats availale"



FUNCTION_destination(currentbalance):
    locationdic={1:"colombo",2:"negombo",3:"kandy",4:"Jaffna"}
    GET_location_number
    DOWHILE((loc>len(locationdic)) or(loc<=0))
        DISPLAY_invalid_location_please_re-enter
        GET_location_number
    cost=100
    FOR i in locationdic:
        cost+=100
        IF loc==i:
            DISPLAY"your location is"locationdic
            IF cost>currentbalance
                BREAK
            ELSE
                RETURN cost
                BREAK
                        ENDIF
            ENDIF
        ENDFOR



FUNCTION costCalculation(currentbalance):
    DISPLAY "Your current account balance is : $",currentbalance
    TRY:
                            ticket_cost=destination(currentbalance)
        accountbalance=currentbalance-ticket_cost
        DISPLAY "cost of ticket : $",ticket_cost
        DISPLAY "your remaining account balance is : $",accountbalance
        IF accountbalance<=500:
            DISPLAY "Your account balance is running low"
            DISPLAY "Please reacharge as soon as possible"
        ENDIF
            DISPLAY "you will receive the digital ticket to your mobile
phone"
            DISPLAY "Thankyou for travelling"

    EXCEPT:
        DISPLAY "cost of ticket : $",ticket_cost
        DISPLAY "Not enough money on your account please recharge"
```

Mobile Alarm App

```
ALARM_APP
----------------------------------------------------------------------
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      FUNCTION Sensor1()
            GET time
            GET distancefromstation
            return time,distancefromstation

      FUNCTION Sensor2()
            GET time
            GET distancefromstation
            return time,distancefromstation


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      sensorlist[sensor1,sensor2,.......,sensor100]
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      alarm=False
      for sensorCounter = 1 to 99
            time1,distanceFromStation1=sensorlist(sensorCounter)
            time2,distanceFromStation2=sensorlist(sensorCounter+1)
            COMUPUTE timeDifference=time2-time1
            distanceDifference=distanceFromStation2-distanceFromStation1
            speed=distanceDifference/timeDifference
            timeLeft=distanceFromStation2/speed
            print("You have",timeLeft,"minutes to reach your destination")

            if alarm=False:
                  alarm=True
                  PROMPT the user to setup a alarm or not
                  GET alarmtime
                  if alarmtime=="Yes":
                        alarmstate=False
                        DiSPLAY "How many minutes before the station must the
alarm ring ?  "
                        Get minutes
                  ENDIF
            ENDIF

            if alarm=True
                  if minutes<=timeLeft:
                              alarmstate=True
                  ENDIF
            ENDIF
END
```