1. **Start**
2. **Declare and initialized: _TravelDistance, _TravelDIrection, _NumberOfPeople, _WindDirection, _WindForce, _DirectionalFactors, _UnitsToTravel, _BaseUnitTime, _PeopleTime, _WindTime, _DirectionTime, _AccumulatedTime, _AccumlatedDistance, _hoursminutes, _averageminutesperkilometer**
3. **Set and put value in _TravelDistance**
4. **Set and put value in _TravelDIrection**
   - **A) North**
   - **B) South**
   - **C) East**
   - **D) West**

5. **Set number of people in the car and store it in _NumberOfPeople**
   If user picked up passengers add number of passengers to _NumberOfPeople
   If user dropped off passengers subtract number of passengers to _NumberOfPeople

6. **Set the direction of the wind and store the value in _WindDirection**
   A) North
   B) South
   C) East
   D) West

7. **Set wind force and store the value in _WindForce**
   - **A)No Wind: Set _WindForce = 0**
   - **B)Weak: Set WindForce = 1**
   - **C)Moderate: Set WindForce = 2**
   - **D)Strong: Set _WindForce = 3**

8. **Set the directional factors and store the value in _directionalIntensity**

   A) Travel against the wind: increase each unit time by a factor of the wind level times 20.0%

B) Travel with the wind: Decrease each unit time by a factor of the wind level times -30.0%

C) Travel perpendicular to wind: Increase each unit time by a factor of the wind level times 5.0%

9. **If _WindForce > 0?**
    a. **Yes: Wind Impact**
        i. **Against the Wind: Set _WindTime = _BaseUnitTime x (_WindForce x (_directionalIntensity=20%)**
            1. **Travel Direction = North and Wind Direction = Southerly**
            2. **Travel Direction = East and Wind Direction = Westerly**
            3. **Travel Direction = South and Wind Direction = Northerly**
            4. **Travel Direction = West and Wind Direction = Easterly**
        ii. **With the Wind: Set _WindTime = _BaseUnitTime x (_WindForce x _directionalIntensity=30%)**
            1. **Travel Direction = North and Wind Direction = Northerly**
            2. **Travel Direction = East and Wind Direction = Easterly**
            3. **Travel Direction = South and Wind Direction = Southerly**
            4. **Travel Direction = West and Wind Direction = Westerly**
        iii. **Perpendicular to the Wind: Set _WindTime = _BaseUnitTime x (_WindForce x _directionalIntensity =5%)**
            1. **Travel Direction = North or South and Wind Direction = East or West**
            2. **Travel Direction = East or West and Wind Direction = North or South**
    b. **No: Set _WindTime = 0**
10. **Calculate units of time store the value in _UnitsToTravel**
    Set: _UnitsToTravel = _TravelDistance / 2km
11. **Calculate Base Unit Time(min) and store it in _BaseTimePlus**
    Set: _BaseUnitTime= _UnitsToTravel X 10
12. **Calculate People Time and store it in _PeopleTime**
    Set: _PeopleTime= _UnitsToTravel X (_NumberOfPeople X 0.1)
13. **Calculate Wind Time and store it in _WindTime**
    Set: _WindTime = _BaseUnitTime X (_DirectionalFactor X (_WindForce/ 100))

14. **Calculate Direction Time and store it in _DirectionTime**
    Set: _DirectionTime = _BaseUnitTime + _PeopleTime + _WindTime
15. **Calculate Accumulated Time and store it in _AccumulatedTime**
    Set: _AccumulatedTime = _AccumulatedTime + _DirectionTime
16. **Calculate Accumulated Distance and store it in _AccumulatedDistance**
    Set: _AccumulatedDistance = _AccumulatedDistance + _TravelDistance

17. **Set: _hoursminutes = _accumulatedTime(min) to divide by 60**
18. **System print the string followed by _hoursminutes : "Minutes expressed as Hours and Minutes (HH:MM): "**
19. **Set: _averageminutesperkilometer = _AccumulatedTime/ _AccumulatedDistance**
20. **System print string follwed by _averageminutesperkilometer " Average mniutes per kilometer travelled "**
21. **If user have another destination? YES Go to #3**
    else) Shut down thesystem, go to #22
22. **End**

서 상화