

Pseudocode

```
DECLARE basePrice : INTEGER

DECLARE engineSizeLtr : REAL
DECLARE priceChangePerc : Integer
DECLARE valueInThousands : Real
DECLARE locationKept : STRING
DECLARE locationFlag : BOOLEAN
DECLARE thousandKilometerDriven : REAL
DECLARE driverAge : INTEGER
DECLARE yearsWithoutClaim : INTEGER
DECLARE discountPerc : INTEGER
DECLARE newCustDiscountPerc : INTEGER
DECLARE addDriverChoice : STRING
DECLARE newDriverAge : INTEGER

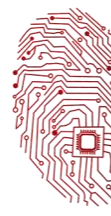
DECLARE newPrice : REAL

basePrice = 500
priceChangePerc = 0
engineSizeLtr = -1.0
valueInThousands = -1000.0
locationFlag = False
thousandKilometerDriven = -1000.0
driverAge = 0
yearsWithoutClaim = -10

WHILE engineSizeLtr < 0
    OUTPUT "Enter the engine size in litres of fuel: "
    INPUT engineSizeLtr

    IF engineSizeLtr > 0.0 AND engineSizeLtr <= 0.5 THEN
        priceChangePerc = priceChangePerc - 5
    ELSEIF engineSizeLtr > 0.5 AND engineSizeLtr <= 1.0 THEN
        priceChangePerc = priceChangePerc + 0
    ELSEIF engineSizeLtr > 1.0 AND engineSizeLtr <= 2.5 THEN
        priceChangePerc = priceChangePerc + 5
    ELSEIF engineSizeLtr > 2.5 THEN
        priceChangePerc = priceChangePerc + 10
    ELSE
        OUTPUT "Please enter a valid engine size."
    END IF
END WHILE
```





Pseudocode

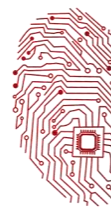
```
WHILE valueInThousands < 0
    OUTPUT "Enter the value of the car (in thousands): "
    INPUT valueInThousands

    IF valueInThousands > 0 AND ValueInThousands < 0.5 THEN
        priceChangePerc = priceChangePerc - 5
    ELSEIF valueInThousands >= 0.5 AND ValueInThousands <= 2 THEN
        priceChangePerc = priceChangePerc + 0
    ELSEIF valueInThousands > 2 AND ValueInThousands <= 10 THEN
        priceChangePerc = priceChangePerc + 5
    ELSEIF valueInThousands > 10 AND ValueInThousands <= 20 THEN
        priceChangePerc = priceChangePerc + 10
    ELSEIF valueInThousands > 20 THEN
        priceChangePerc = priceChangePerc + 15
    ELSE
        OUTPUT "Please enter a valid price."
    END IF

END WHILE

WHILE locationFlag = FALSE
    OUTPUT "Enter the location where the car is kept overnight
           (Garage/Drive/Street): "
    INPUT locationKept
    IF UPPER(locationKept) = "GARAGE" THEN
        locationFlag = TRUE
        priceChangePerc = priceChangePerc - 5
    ELSEIF UPPER(locationKept) = "DRIVE" THEN
        locationFlag = TRUE
        priceChangePerc = priceChangePerc + 0
    ELSEIF UPPER(locationKept) = "STREET" THEN
        locationFlag = TRUE
        priceChangePerc = priceChangePerc + 5
    ELSE
        OUTPUT "Please enter a valid location (Garage/Drive/Street)."
```





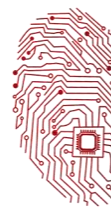
Pseudocode

```
WHILE thousandKilometerDriven < 0
    OUTPUT "Enter the kilometers driven per year (in thousands): "
    INPUT thousandKilometerDriven
    IF thousandKilometerDriven >= 0 AND thousandKilometerDriven < 5 THEN
        priceChangePerc = priceChangePerc - 5
    ELSEIF thousandKilometerDriven >= 5 AND thousandKilometerDriven <= 20
        THEN
            priceChangePerc = priceChangePerc + 0
    ELSEIF thousandKilometerDriven > 20
        priceChangePerc = priceChangePerc + 5
    ELSE
        OUTPUT "Please enter a valid value for the thousands of
            kilometers driven."
    END IF
END WHILE

WHILE drivenAge < 18
    OUTPUT "Enter the age of the driver: "
    INPUT driverAge

    IF driverAge >= 18 AND driverAge <= 20 THEN
        priceChangePerc = priceChangePerc + 100
    ELSEIF driverAge >= 21 AND driverAge <= 25 THEN
        priceChangePerc = priceChangePerc + 50
    ELSEIF driverAge >= 26 AND driverAge <= 30 THEN
        priceChangePerc = priceChangePerc + 25
    ELSEIF driverAge >= 31 AND driverAge <= 70 THEN
        priceChangePerc = priceChangePerc + 0
    ELSEIF driverAge >= 71 AND driverAge <= 80 THEN
        priceChangePerc = priceChangePerc + 10
    ELSEIF driverAge >= 80
        priceChangePerc = priceChangePerc + 20
    ELSE
        OUTPUT "Please enter a valid age."
    END IF
END WHILE
```





Pseudocode

```
WHILE yearsWithoutClaim < 0
    OUTPUT "Enter the number of years without an insurance claim: "
    INPUT yearsWithoutClaim

    CASE OF yearsWithoutClaim
        0: discountPerc = 0
        1: discountPerc = 10
        2: discountPerc = 20
        3: discountPerc = 30
        4: discountPerc = 40
        5: discountPerc = 50
        6: discountPerc = 60
        Is >6: discountPerc = 70
    OTHERWISE
        OUTPUT "Please enter a valid argument."
    END CASE
END WHILE

// ADDITIONAL CODE FOR TASK 3 BEGINS HERE

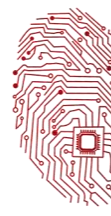
OUTPUT "Would you like to add another driver? (Y/N) "
INPUT addDriverChoice

IF UPPER(addDriverChoice) = "Y" THEN
    newDriverAge = 0

    WHILE newDriverAge < 18
        OUTPUT "Enter the age of the second driver: "
        INPUT newDriverAge

        IF newdriverAge >= 18 AND newdrivenAge <= 20 THEN
            priceChangePerc = priceChangePerc + 100
        ELSEIF newdriverAge >= 21 AND newdriverAge <= 25 THEN
            priceChangePerc = priceChangePerc + 50
        ELSEIF newdriverAge >= 26 AND newdriverAge <= 30 THEN
            priceChangePerc = priceChangePerc + 25
        ELSEIF newdriverAge >= 31 AND newdriverAge <= 70 THEN
            priceChangePerc = priceChangePerc + 0
        ELSEIF newdriverAge >= 71 AND newdriverAge <= 80 THEN
            priceChangePerc = priceChangePerc + 10
        ELSEIF newdriverAge >= 80
            priceChangePerc = priceChangePerc + 20
        ELSE
            OUTPUT "Please enter a valid age."
        END IF
    END WHILE
END IF
```





Pseudocode

```
// ADDITIONAL CODE FOR TASK 3 ENDS HERE
newPrice = basePrice + (priceChangePerc / 100) * basePrice

newPrice = newPrice - ((discountPerc / 100) * newPrice)

OUTPUT "The total percentage change in the base price of insurance is: " +
    priceChangePerc + "%"
OUTPUT "The percentage discount due to years without claim is: " + discountPerc
    + "%"

// ADDITIONAL CODE FOR TASK 2 BEGINS HERE
IF driverAge >= 26 AND driverAge <= 70 THEN
    IF yearsWithoutClaim >= 2 THEN
        newCustDiscountPerc = 10
    END IF
END IF

OUTPUT "The amount of money saved by applying the 'new customer discount' is:
    $" + (newPrice * (newCustDiscountPerc / 100))

newPrice = newPrice - ((newCustDiscountPerc / 100) * newPrice)

// ADDITIONAL CODE FOR TASK 2 ENDS HERE
OUTPUT "The price to insure your car is: $" + newPrice
```

