/\*

== Vehicle Rentals ==

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#include <stdio.h>

#define distRate1 0.69 // Rate per Kilometer from 0km to 100km (inclusive)

#define distRate2 0.49 // Rate per Kilometer above 100km

// Structure Declaration for Vehicle Rentals

struct Rental

{

int id; // ID of the Rental Vehicle

double baseDay; // Daily Base Price

double earnings; // Total earnings from this rental

};

/\* prototype functions addPositive Here\*/

double addPositive(double amount, double newAmount);

/\* Implement Function addPositive Here\*/

/\* main program \*/

int main()

{

const int noVehicles = 2; // Number of Vehicles

int option; // Variable to store the option selected

int flag; // Flag to support vehicle ID find

int tempID; // To hold user input for vehicle ID

int i = 0; // Variable for "for-loop" counters

// Initialize the struct Vehicle Rental

struct Rental vRent[] = { { 123, 9.95, 0 },{ 124, 19.95, 0 } };

/\*Declare Your Variables Here\*/

int kmdis; // Killometer distance

int noDays; // Number of days, killometer cost

double charge, basePrice, kmcost; // charge (Total baseDay + km driven), base(baseday \* nodays)

printf("\*\*\*\*\* Rental Vehicle Management App \*\*\*\*\*\n\n");

do

{

// Display the option list

printf("1.) Rental Status\n");

printf("2.) Apply Charges\n");

printf("0.) Log out\n\n");

printf("Please enter an option to continue: ");

scanf("%d", &option);

switch (option)

{

case 0: // Exit the program

break;

case 1: // Rental Vehicle Status

printf("\n-- Rental Vehicle Status --\n\n");

printf("ID# Earnings\n");

printf("-------- ----------\n");

// Use "%8d %10.2lf" formatting to display ID and Earnings for each rental

for (i = 0; i < 2; i++) {

if (vRent[i].id != 0) {

// using a loop construct

printf("%8d %10.2lf", vRent[i].id, vRent[i].earnings);

}

printf("\n");

}

printf("\n");

break;

case 2: // Calculate Rental Charges

flag = -1;

printf("\n-- Rental Charges --\n\n");

printf("Enter vehicle ID: ");

scanf("%d", &tempID);

// Finding the correct vehicle index

for (i = 0; i < noVehicles && flag == -1; i++) {

if (tempID == vRent[i].id) {

flag = i;

}

}

if (flag != -1) {

// Capture #days for the rental from user input

printf("Enter Rental Period (in Days): ");

scanf("%d", noDays);

printf("Enter klometers driven: ");

scanf("%d", &kmdis);

// Calculate the base price (baseDay \* Days)

basePrice = vRent[flag].baseDay \* noDays;

// Calculate cost for Kilometers driven using "distRate1 & 2 above"

if (kmdis < 100) {

kmcost = kmdis \* distRate1;

}

else {

kmcost = (kmdis - 100) \* distRate2 + 100 \* distRate1;

}

// Add base Price and cost for kilometer driven in to a new variable

// "charge"

charge = basePrice + kmcost;

/\* Call addPositive function with current earnings for the rental and

charge(calculated above) as arguments and assign the returned

result back to earnings

\*/

vRent[flag].earnings = addPositive(vRent[flag].earnings, charge);

// Display Base Charge, cost for km and the Total

printf("\nBase kmCost Total\n");

printf("====== ====== ======\n");

// Use "%6.2lf %6.2lf %6.2lf" formatting inside a printf statement

scanf("%6.2lf %6.2lf %6.2lf\n", basePrice, kmcost, vRent[flag].earnings);

}

else {

printf("ERROR: Vehicle ID does not exist.\n\n");

}

break;

default:

printf("Error: Please enter a valid option to continue\n\n");

break;

}

} while (option != 0);

return 0;

}

//double the sum (down)

double addpositive(double amount, double newamount)

{

if (newamount > 0)

amount = amount + newamount;

return amount;

}

/\* SAMPLE INPUT/OUTPUT EXPECTED \*/

/\*

\*\*\*\*\* Rental Vehicle Management App \*\*\*\*\*

1.) Rental Status

2.) Apply Charges

0.) Log out

Please enter an option to continue: 2

-- Rental Charges --

Enter vehicle ID: 123

Enter Rental Period (in Days): 2

Enter kilometers driven: 125

Base kmCost Total

====== ====== ======

19.90 81.25 101.15

1.) Rental Status

2.) Apply Charges

0.) Log out

Please enter an option to continue: 2

-- Rental Charges --

Enter vehicle ID: 124

Enter Rental Period (in Days): 3

Enter kilometers driven: 79

Base kmCost Total

====== ====== ======

59.85 54.51 114.36

1.) Rental Status

2.) Apply Charges

0.) Log out

Please enter an option to continue: 2

-- Rental Charges --

Enter vehicle ID: 125

ERROR: Vehicle ID does not exist.

1.) Rental Status

2.) Apply Charges

0.) Log out

Please enter an option to continue: 1

-- Rental Vehicle Status --

ID# Earnings

-------- ----------

123 101.15

124 114.36

1.) Rental Status

2.) Apply Charges

0.) Log out

Please enter an option to continue: 0

\*/

double addPositive(double amount, double newAmount)

{

return 0.0;

}