PRESENTATION ON QUESTION No.44

THE QUESTION IS

These rates apply to the Lincoln & Holland tunnels, the George Washington, Bayonne & Goethals bridges, and the Outerbridge Crossing. Write Java code to determine the amount of money you pay at the toll depending on:

THE TOLL PRICE ON NEXT PAGE

TOLL RATES

CLASS	VEHICLE TYPE	# OF REAR WHEELS	# OF AXLES	E-ZPass OFF-PEAK HOURS	E-ZPass PEAK HOURS	E-ZPass TRUCKS WEEKDAY OVERNIGHT HOURS	CASH TOLL/ TOLLS BY MAIL ALL HOURS
1	**VEHICLES WITH TWO AXLES AND SINGLE REAR WHEELS** (INCLUDES TWO AXLE RECREATIONAL VEHICLES WITH SINGLE REAR WHEELS AND NO ADD'L AXLES IN TOW) 		2	$11.75	$13.75	N/A	$16.00
2	**VEHICLES WITH TWO AXLES AND DUAL REAR WHEELS** (INCLUDES TWO AXLE RECREATIONAL VEHICLES WITH DUAL REAR WHEELS) 		2	$36.00	$38.00	$33.00	$44.00
3	**VEHICLES WITH THREE AXLES** OR COMBINATIONS OF VEHICLES TOTALING THREE AXLES† 		3	$54.00	$57.00	$49.50	$66.00
4	**VEHICLES WITH FOUR AXLES** OR COMBINATIONS OF VEHICLES TOTALING FOUR AXLES† 		4	$72.00	$76.00	$66.00	$88.00
5	**VEHICLES WITH FIVE AXLES** OR COMBINATIONS OF VEHICLES TOTALING FIVE AXLES† 		5	$90.00	$95.00	$82.50	$110.00
6	**VEHICLES WITH AT LEAST SIX AXLES** OR COMBINATIONS OF VEHICLES TOTALING AT LEAST SIX AXLES† 		6 & Up	$108.00 Additional Axles $18.00 each	$114.00 Additional Axles $19.00 each	$99.00 Additional Axles $16.50 each	$132.00 Additional Axles $22.00 each
7	**CLASS 1 OR 11 (INCLUDING CLASS 1 RECREATIONAL VEHICLES) WITH TRAILER** (MINIMUM THREE SINGLE WHEEL AXLES) 		3 & Up	$22.25 Additional Axles $10.50 each	$24.25 Additional Axles $10.50 each	N/A	$34.00 Additional Axles $18.00 each
8	**TWO AXLE BUSES AND MINI BUSES*** (SEATING CAP. = 10 OR MORE) 		2	$14.00	$14.00	N/A	$25.00
9	**THREE AXLE BUSES AND MINI BUSES*** (SEATING CAP. = 10 OR MORE BUSINESS ACCOUNT ONLY) 		3 & Up	$14.00	$14.00	N/A	$25.00
11	**MOTORCYCLE** 		2	$10.75	$12.75	N/A	$16.00

TAKING INPUT

int vcl=VEHICLE,
 int wekd=WEEKDAYS
int axl=AXELS
float tm=TIME
char ezps=EZPASS

CHECKING CONDITION FOR VALID VEHICLE TYPE

IN THIS CONDITION WE HAVE TO CHECK FOR THE VALID VEHICLE TYPE,

IN OUR CASE THERE ARE 10 TYPES OF VEHICLES

IF HE USER ENTER INVALID VEHICLE TYPE THE CODE WILL BE TERMINATE AND WILL SAY

"INVALID VEHICLE TYPE"

CHECKING CONDITION FOR VALID WEEKDAY

In this condition we have to check for the valid week day ,
In our case there 7 week days
if he user enter invalid week day type the code will be terminate and will say
"invalid weekday"

CHECKING CONDITION FOR VALId TIME

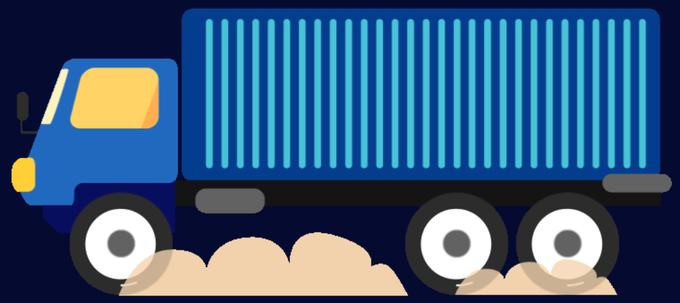
In this condition we have to check for the valid time ,
int this program we are using 24 hours time format,
So the time should be under or equal to 24 and greater then 0,
if he user enter invalid time type the code will be terminate
and will say
"invalid Time"

CHECKING CONDITION FOR THE USER HAS EZPASS OR NOT

In this condition we have to check fOR EZPASS ,
The user has ezpass the the next condition will be checked,
if he user enter c or any other character accept 'P' and 'p' the code will give output.
"NO EZPASS DETECTED THE PAYMENT WILL BE DONE IN CASH"

LET SUPPOSE

THE USER GIVES INPUT OF VEHICLE TYPE 6 THE PROGRAM WILL ASK FOR EZPASS OR NOT IF YES THE NEXT CONDTION WLL BE APPLIED .



LET SUPPOSE THE USER ENTERS NUMBER BETWEEN 1 AND 3

CHECKING CONDITION FOR MONDAY TO WEDNESDAY

if wekd <= 3

The next condition will be appiled

CHECKING CONDITION FOR PEAK TIME

In this condition the peak time is checked in this way
if tm >= 7 && tm <= 10 || tm >= 16 && tm <= 20
if the user enter the time according to this time the output will be
"YOU ARRIVED ON PEAK TIME \nTHE TOLL APPILED ON YOUR VEHICLE IS Rs."+114+(19*axl)
else is the time don't matches the next condition will be appiles

CHECKING CONDITION FOR OFF PEAK TIME

In this condition the off peak time is checked in this way

else if tm >= 11 && tm <= 15 || tm >= 21 && tm < 22

if the user enter the time according to this time the output will be "YOU ARRIVED ON OFF PEAK TIME THE TOLL APPILED ON YOUR VEHICLE IS Rs."+114+(18*axl)

else is the time don't matches the next condition will be appiles

ELSE CONDITION FOR OVER NIGHT TIME

In this condition the over night time is checked in this way

else if tm >= 11 && tm <= 15 || tm >= 21 && tm < 22

if the user enter the time according to this time the output will be "YOU ARRIVED ON OFF PEAK TIME THE TOLL APPILED ON YOUR VEHICLE IS Rs."+114+(18*axl)

else is the time don't matches the next condition will be appiles

ELSE CONDITION FOR NO EZPASS

If the user dont have the ezpass the ouput will be
"THE AMOUNT OF TOLL APPILED ON YOUR VEHICLE IS Rs."+(132+(16*axl)
The program will give output accoring to the number of additional axels.

ALGORITHUM

STEP1:- START
STEP2:- INPUT int vcl=VEHICLE,
int wekd=WEEKDAYS,
int axl=AXELS,
int float tm=TIME,
char ezps=EZPASS
STEP3:- CONDITION 1 IF(VCL<=10)
STEP4:- IF TRUE CONDITION 2 if wekd<=7 && wekd>0
STEP5:- IF TRUE CONDITION 3 if tm<=24
STEP6:- IF TRUE CONDITION 4 if ezps=='p' || ezps=='P'
STEP7:- IF TRUE CONDITION 5

ALGORITHUM

STEP8:- IF CONDITION 1 FALSE OUTPUT :-"PLEASE ENTER A VALID VEHICLE TYPE"
STEP9:- IF CONDITION 2 FALSE OUTPUT :-"PLEASE ENTER A VALID VEHICLE TYPE"
STEP10:- IF CONDITION 3 FALSE OUTPUT :-"PLEASE ENTER A VALID TIME"
STEP11:- IF CONDITION 4 FALSE OUTPUT :-"PAYMENT WILL BE DONE IN CASH"
STEP12:- IF CONDITION 5 FALSE OUTPUT :-"PAYMENT WILL BE DONE IN CASH"

ALGORITHUM

LET SUPPOSE USER ENTER VEHICLE TYPE 6

STEP13:- CONDITION 6 IF(VCL=6)
STEP14:- IF TRUE CONDITION 7 if (ezps == 'p' || ezps == 'P')
STEP15:- IF TRUE CONDITION 8 if (wekd <= 3)
STEP16:- IF TRUE CONDITION 9 if (tm >= 7 && tm <= 10 || tm >= 16 && tm <= 20)
STEP17:- IF TRUE CONDITION 10 OUTPUT
"YOU ARRIVED ON PEAK TIME \nTHE TOLL APPILED ON YOUR VEHICLE IS Rs."+(114+(19*axl)) go to step 19
STEP17:- IF CONDITION 10 FALSE CONDITION 11 APPLIES else if
(tm >= 11 && tm <= 15 || tm >= 21 && tm < 22) got to step 19
STEP18:-OUTPUT "YOU ARRIVED ON OFF PEAK TIME \nTHE TOLL APPILED ON YOUR VEHICLE IS Rs."+(108+(18*axl)) go to step 19

ALGORITHUM

STEP17:- IF CONDITION 11 FALSE
STEP18:-OUTPUT "YOU ARRIVED ON OFF PEAK TIME \nTHE TOLL APPILED ON YOUR VEHICLE IS Rs."+(108+(18*axl)) go to step 19
STEP19:-STOP

PRESENTED BY VIKAS JOSHI