

CSE 20 : Project #1

This is our first project requiring you to use everything we have done so far in the class. Create a new class called Bobcar (Bobcar.java) to do all your work. You may work in pairs or by yourself. The expectation is that you work on the project outside of lab time but you may certainly use any extra time in lab this week. Your partner can be in any section, both of you will make your own submission while noting your collaborator/partner in the text box of the submission. We have included sample runs to give you a better idea of how the program works given the project requirements. Refer to your previous lab assignments for hints on how to approach this project. You can ask the TAs or the instructor for clarifications and help. This project is worth 60 points so be sure to complete it. Submit Bobcar.java for this project in the assignment page *after* properly formatting it with instructions below on how-to inside Eclipse.

Problem:

You have been hired by Bobcar Rent-a-Car to provide a self-service computer program, which will provide an estimated cost for a rental car. Bobcar has 3 classes of cars, which are as follows:

- ❑ Economy: \$25 per day
- ❑ Compact: \$55 per day
- ❑ Standard: \$100 per day

You need to write a program that asks the user for the following

- ❑ Type of car they want
- ❑ How many days they want to rent the car
- ❑ Whether they are a club member
 - ▶ If yes then whether they want the "Platinum Executive Package"

Note that the question about the Platinum Executive Package only applies to club members. Then calculate the estimate cost for the customer using the following rules and print it out accordingly.

- ❏ Calculate the base price for the rental, by multiplying the cost of one day by the number of days.
- ❏ If the user is a club member, calculate the discount based on how many multiples of 5 days they are renting. Any remaining days which are not multiples of 5 do not count towards the discount. For example:
 - ▶ If rental is for 10 days, discount is 2 days cost.
 - ▶ If rental is for 17 days, discount is 3 days cost.
 - ▶ If rental is for 4 days, discount is 0.
- ❏ If the user wanted Platinum Executive Package, calculate the cost of the package by multiplying the base price by 20%.
- ❏ Calculate the estimated total, which is the base cost, minus the discount (if any) and plus the Platinum cost (if any).
- ❏ Finally, print out the final amounts of the estimate, showing the base cost, any extra costs, and estimated total. If the user is not a club member then discount line should not appear in the estimate. If the user did not ask for the Platinum service then additional cost should not appear.
- ❏ Before you submit, do ctrl-a (to select everything) and ctrl-i (to fix the indentation) on Bobcar.java
- ❏ Output indenting does not have to have identical spacing as the sample runs. However, your text should be the same as stated (do not take short cuts and lose easy points)

Sample Output Runs:

```
Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 1
Please enter the number of rental days: 3
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 1

Base: 3 days for a Economy @ $25 per day:      $ 75
Club Member Discount:                          - $ 0
Platinum Executive Package:                    + $ 15

Total Estimate for Rental:                      $ 90
```

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 1
Please enter the number of rental days: 6
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 1

Base: 6 days for a Economy @ \$25 per day:	\$ 150
Club Member Discount:	- \$ 25
Platinum Executive Package:	+ \$ 30
Total Estimate for Rental: \$ 155	

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 1
Please enter the number of rental days: 6
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 0

Base: 6 days for a Economy @ \$25 per day:	\$ 150
Club Member Discount:	- \$ 25
Total Estimate for Rental: \$ 125	

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 1
Please enter the number of rental days: 6
Club member?: 1 for yes, 0 for no: 0

Base: 6 days for a Economy @ \$25 per day:	\$ 150
Total Estimate for Rental: \$ 150	

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 2
Please enter the number of rental days: 10
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 1

Base: 10 days for a Compact @ \$55 per day:	\$ 550
Club Member Discount:	- \$ 110
Platinum Executive Package:	+ \$ 110
Total Estimate for Rental: \$ 550	

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 3
Please enter the number of rental days: 14
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 1

Base: 16 days for a Standard @ \$100 per day:	\$ 1400
Club Member Discount:	- \$ 200
Platinum Executive Package:	+ \$ 280
Total Estimate for Rental:	\$ 1480

Available cars: 1 for Economy, 2 for Compact, 3 for Standard
Please choose the rental car: 3
Please enter the number of rental days: 7
Club member?: 1 for yes, 0 for no: 1
Platinum Executive Package?: 1 for yes, 0 for no: 0

Base: 7 days for a Standard @ \$100 per day:	\$ 700
Club Member Discount:	- \$ 100
Total Estimate for Rental:	\$ 600