Central Asian University

Engineering school

Department of Industrial Engineering

Fall 2025 - Week 9

Programming problem sets

1. [parking-ticket] Car parking ticket charging program.

A parking garage charges a $2.00 minimum fee to park for up to three hours. The garage charges an additional $0.50 per hour for each hour or part thereof in excess of three hours. The maximum charge for any given 24-hour period is $10.00. Assume that no car parks for longer than 24 hours at a time. Write an application that calculates and displays the parking charges for each customer who parked in the garage yesterday. You should enter the hours parked for each customer. The program should display the charge for the current customer and should calculate and display the running total of yesterday's receipts. It should use the method calculate. Charges to determine the charge for each customer.

Output: Input: 2, 3, 23

14$

2. [square-asterisks] Printing square asterisks on console.

Write a method squareOfAsterisks that displays a solid square (the same number of rows and columns) of asterisks whose side is specified in integer parameter side. For example, if side is 4, the method should display. Incorporate this method into an application that reads an integer value for side from the user and outputs the asterisks with the squareOfAsterisks method.

Output: Input: 4

* * * *
* * * *
* * * *
* * * *

3. [circle-area]

Write an application that prompts the user for the radius of a circle and uses a method called circleArea to calculate the area of the circle.

Output: 153.94 Input: 7