

BRAC UNIVERSITY

Department of Electrical and Electronic Engineering
CSE162/EEE103IL/ECE103IL: Computer Programming Laboratory
Final Project

Full Marks: (10+20 = 30)

General Instructions

- Groupwise project.
- Implementation must utilize the C programming language.
- Students need to submit a report as the project submission.
- Students should provide necessary explanations of their code as comments. Codes with no comments might be treated as plagiarized, and marks might be deducted.
- Copy your codes with proper indentation and paste them into your report. Provide clear screenshots of your outputs.
- 10% of the total marks will be on the clarity of your report.

Complex Engineering Attributes

P1 Depth of knowledge required

P3 Depth of analysis required

P7 Interdependence

Problem 1. Suppose you have to design software for the Oscar Jury members where they can rate the nominated movies on a scale of 1-10. Here is the movie list

- Nayak: The Hero
- The Cloud-Capped Star
- The Music Room
- Pather Panchali
- Charulata
- Subarnarekha
- Days and Nights in the Forest
- The Unnamed

The program will ask five judges to rate movies one by one. After completing the rating from all five judges, the output window will show the movie name and its rating in

- a. ascending order of rating if your Group number is even.
- b. descending order of rating if your Group number is odd.

Problem 2. An electricity board charges the following rates mentioned in the table for the use of electricity. All users are charged Taka 50 as a meter charge for every month. If any user wants to change/replace his meter, he will be charged taka 2000. The monthly bill will be generated based on

- Customer Category
- Consumed Units
- Phase
- Flat rate, peak time, and off-peak time
- Meter Charge

Write a program to read the ID of users, customer category, phase, number of units consumed, and other necessary inputs. Finally, print out the monthly bill.

Note: Use of user-defined functions is mandatory.

Tariff Rate			
SL	Customer Category and Slab	New Tariff Per Unit Rate (Tk.) Effective from Bill month September, 2015	Service Charge (Tk./Month)
1	Category A: Residential		
	Life Line: 1-50 Units		1-Phase: 10.00 3-Phase: 30.00
	a	First Step: From 00 to 75 units	
	b	Second Step: From 76 to 200 units	
	c	Third Step: From 201 to 300 units	
	d	Fourth Step: From 301 to 400 units	
	e	Fifth Step: From 401 to 600 units	
	f	Sixth Step: From 601 to above	
2	Category B: Agricultural pumping	3.82	30.00
3	Category C: Small Industries		
	a	Flat Rate	70.00
	b	Off-Peak Time	
	c	Peak Time	
4	Category D: Non-Residential (Light & Power)	5.22	1-Phase: 10.00 3-Phase: 30.00
5	Category E: Commercial & Office		
	a	Flat Rate	1-Phase: 10.00 3-Phase: 30.00
	b	Off-Peak Time	
	c	Peak Time	