GKSS-SPU: CODE CLINIC

19 JUNE 2021

BASIC JAVA PROGRAMMING: 1st YEARS

Scenario:
A network service provider charges 90 cents per minute for all calls outside the customer's area code that lasts OVER 60 minutes. All calls outside the customer's area code that last UNDER 60 minutes are 150 cents per minute.

Required:
The program must accept data for MAXIMUM of 2 Customer's phone calls .

Create a JAVA program that accepts the following data about 2 phone calls:
- customer area code
- customer phone number
- called area code
- called number
- call time in minutes.

The program must display the price for calls ONLY if the call is one in which the area code where the call originated is different from the called area code.

Given: A sample of a structured Flowchart

```
                    ┌─────────┐
                    (  start  )
                    └────┬────┘
                         │
          ┌──────────────▼──────────────┐
          │ Declarations                │
          │    num custAreaCode         │
          │    num custPhoneNum         │
          │    num calledAreaCode       │
          │    num calledPhoneNum       │
          │    num minutes              │
          │    num price                │
          │    num LOW_RATE = 0.10      │
          │    num HIGH_RATE = 0.13     │
          │    num TIME_LIMIT = 20      │
          └──────────────┬──────────────┘
                         │
          ╱──────────────▼──────────────╲
         ╱  input custAreaCode, custPhoneNum, ╲
        ╱   calledAreaCode, calledPhoneNum,    ╲
        ╲   minutes                            ╱
         ╲──────────────┬──────────────────╱
                         │
  No          ◇──────────▼──────────◇          Yes
  ◄───────────  custAreaCode not equal to  ────────────┐
              ◇   calledAreaCode?   ◇                   │
               ◇──────────────────◇                     │
                                                        │
                  No    ◇─────────▼─────────◇    Yes
                  ┌──────  minutes > TIME_LIMIT?  ──────┐
                  │      ◇───────────────────◇          │
                  │                                     │
          ┌───────▼────────┐                  ┌─────────▼────────┐
          │ price = minutes *│                 │ price = minutes *│
          │   HIGH_RATE      │                 │   LOW_RATE       │
          └───────┬─────────┘                  └─────────┬───────┘
                  │                                      │
                  └──────────────┬───────────────────────┘
                                 │
                 ╱───────────────▼────────────────╲
                ╱  output custAreaCode,             ╲
                ╲  custPhoneNum, calledAreaCode,     ╱
                 ╲ calledPhoneNum, price            ╱
                  ╲──────────────┬───────────────╱
                                 │
                    ┌────────────▼───┐
                    (     stop       )
                    └────────────────┘
```