**Plan for PA 4**

1. *Program Purpose*: Calculates mult. customers cable bill.

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| **Input** | **Processing** | **Output** |
|  |  |  |

1. *Class Diagram:*

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| --- | --- |
| Class Name | public class GaribayJackson004PA04 {} |
| Class  Data Members | public class Cable{}  public class Invoice {} |
| Method  Data Members |  |
| Methods | public void start()  public void processBills()  public void displayBills()  public void printThankYou()  public void setMoviesPurchased(int num1)  determineCableSrv(int num1) |

1. *Program Logic:*

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| **import Stmts: *import NameOfClass*** |
| import java.util.Scanner;  import java.time.LocalDate;  import java.util.Arrays; |

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| **Class Header: *public class NameOfYourClass*** |
| public class GaribayJackson004PA04 {}  public class Cable{}  public class Invoice {} |

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| **Class Variables (Fields): *Refer to the Class Data Members section of the class diagram for a list of class variables which should always be private (-).*** |
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**Method Logic table**

**🡻Recopy for each method in your program.**

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| **Method Purpose: This method captures the users choice to process cable bills** | | |
| **Method Header** | public void start() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | anwser | 'Y' or 'N' |
|  |  |  |
| **Calculations** | **Formulas** | |
|  | N/A | |
| **Print** | **Output** | |
| **1 of 1** | Do you want to begin processing cable bills? Enter 'Y' or 'N': | |
| **Algorithms** | Prompt 1  if(Character.toUpperCase(answer) == 'Y') {  processBills();  displayBills();  } else {  printThankYou(); | |

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| **Method Purpose: This method captures the number of billd to process.** | | |
| **Method Header** | public void processBills() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | numBills | How many bills are there to process? |
|  |  |  |
| **Calculations** | **Formulas** | |
|  | int i=0; i < numBills; i++ | |
| **Print** | **Output** | |
| **1 0f 1** | How many bills are there to process? | |
| **Algorithms** | Prompt 1  Print  **"How many bills are there to process?"**  numBills = input.nextInt();  cableBills = new Invoice[numBills];  billingStmts = new String[cableBills.length];  for(  cableBills[i] = new Invoice();  cableBills[i].setCustNm(i);  cableBills[i].determineCableSrv(i);  cableBills[i].setMoviesPurchased(i);  ) | |

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| **Method Purpose: This method displays the users bill** | | |
| **Method Header** | public void displayBills() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cableBills.getCustNm()  '$'  cableBills.getCableSrv()  ' '  movieCharges,  '$'  total | *Refer to prompt below.* |
| **billingStmts[0] = String.format("%nCustomer: %S"**  **+ "%n%nCable Service: %20c%,10.2f"**  **+ "%nMovies-On-Demand-HD: %14c%,10.2f"**  **+ "%n%nTOTAL DUE: %24c%,10.2f%n",**  **cableBills.getCustNm(), '$', cableBills.getCableSrv(), ' ', movieCharges, '$', total);** | | |
| **Calculations** | **Formulas** | |
|  | double total = cableBills.getMoviePurchased() + cableBills.getCableSrv();  double movieCharges = cableBills.getMoviePurchased(); | |
| **Algorithms** | for (Invoice cableBills : cableBills) {  [formulas go here]  **Print:**  **“SA CABLE CHARGES AS OF ##/##/##”**  **Customer: ‘The Dudes Name Goes Here’**    **Cable Service: $ ###.##**  **Movies-On-Demand-HD: ###.##**    **TOTAL DUE: $ ###.##** | |

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| --- | --- | --- |
| **Method Purpose: This method thanks the user/customer.** | | |
| **Method Header** | public void printThankYou() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
|  | n/a | n/a |
| **Calculations** | **Formulas** | |
|  | n/a | |
| **Print** | **Output** | |
| **1 of 1** | Thank you for being a valued SA Cable Customer! | |
| **Algorithms** | Prompt 1  Print  **“Thank you for being a valued SA Cable Customer!”** | |

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| **Method Purpose: This method captures the cable subscription package.** | | |
| **Method Header** | public void setCablePkg(int num1) | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cablePkg | *Refer to prompt below.* |
| **“SA CABLE – SUBSCRIPTION PACKAGES”**  **“1. Basic: Local & major TV network channels $ 35.00”**  **“2. Deluxe: Local, major TV, cable & 100 other channels 75.00”**  **“3. Premium: Deluxe package plus HBO, on demand & 300 other channels 110.00”**  **“Select the cable subscription package for customer “, i + 1, “: “** | | |
| **Algorithms** | Prompt 1  while not an integer  input calls next()  Print  “You must only enter an integer: “    **“1. Basic: Local & major TV network channels $ 35.00”**  **“2. Deluxe: Local, major TV, cable & 100 other channels 75.00”**  **“3. Premium: Deluxe package plus HBO, on demand & 300 other channels 110.00”**  **“Select the cable subscription package for customer “, i + 1, “: “**  endWhile  cablePkg = input calls nextInt()  input calls nextLine() | |

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| --- | --- | --- | --- |
| **Method Purpose: This method captures the number of movies purchased.** | | | |
| **Method Header** | | public void setMoviesPurchased(int num1) | |
| **Method Variables** | | n/a | |
| **CODE** | | | |
| **Prompts** | **Input Variables** | | **Input Prompt** |
| **1** | noOfMovies | | **“SA CABLE – MOVIES”**  **“Enter the number of Movies-On-Demand-HD purchases for customer “, i + 1, “: “** |
| **Algorithms** | Prompt 1  while not an integer  input calls next()  Print  “You must only enter an integer: “    **"Enter the number of Movies-On-Demand-HD purchases for customer %d"**  **, i + 1, “: “**  endWhile  this.noOfMovies = input.nextInt();  input calls nextLine() | | |

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| **Method Purpose: This Method Assigns a Price for the Cable Service.** | | |
| **Method Header** | determineCableSrv(int num1) | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cablePkg |  |
| **Calculations** | **Formulas** | |
|  | this.cableSrv = 35.00;  this.cableSrv = 75.00;  this.cableSrv = 110.00; | |
|  |  | |
| **Print** | **Output** | |
|  | Invalid Selection! | |
|  |  | |
| **Algorithms** | Prompt 1  Switch  Case 1  Case 2  Case 3  Default  End switch  Print:  **“Invalid Selection!”** -  If output for any Int ! 1 through 3 | |