**Plan for PA 4**

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

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| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| **custNm**  **cablePkg**  **cableSrv**  **noOfMovies** | this.cableSrv = 35.00;  this.cableSrv = 75.00;  this.cableSrv = 110.00; | SA CABLE CHARGES AS OF 99/99/99  Customer: XXXXXXXXXXXXXXX  Cable Service: $Z,ZZ9.99  Movies-On-Demand-HD: Z,ZZ9.99  TOTAL DUE: $ZZ,ZZ9.99  Thank you for being a valued SA Cable customer! |

1. *Class Diagram:*

|  |  |
| --- | --- |
| Class Name | public class Invoice{} |
| Class  Data Members | #custNm: String  #cablePkg: int  #cableSrv: double  #noOfMovies: int |
| Method  Data Members | n/a |
| Methods | public Invoice(String custNm)  public void setCustNm(int num1)  public void setCablePkg(int num1)  public void determineCableSrv(int num1)  public void setMoviesPurchased(int num1)  public int getMoviePurchased()  public double getCableSrv()  public int getCablePkg()  public String getCustNm() |

1. *Program Logic:*

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| **import Stmts: *import NameOfClass*** |
| import java.util.Scanner; |

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| **Class Header: *public class NameOfYourClass*** |
| 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 (-).*** |
| **-String custNm**  **-int cablePkg**  **-double cableSrv**  **-int noOfMovies** |

**Method Logic table**

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

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| --- | --- | --- |
| **Method Purpose:** | | |
| **Method Header** | public Invoice(String custNm) | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | custNm |  |
| **Calculations** | **Formulas** | |
|  |  | |
|  |  | |
| **Print** | **Output** | |
|  |  | |
|  |  | |
| **Algorithms** | Prompt 1    this.custNm = input.nextLine(); | |
|  |  | |

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| --- | --- | --- |
| **Method Purpose: This method captures the cable subscription package.** | | |
| **Method Header** | public void setCustNm(int num1) | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cablePkg | *Refer to prompt below.* |
| **“WLECOME TO SA CABLE”**  **Please enter customer %d's name:** | | |
| **Algorithms** | Prompt 1  Print  **“Welcome to SA Cable”**  **“Please enter customer %d’s name: ”**  this.custNm = input.nextLine(); | |

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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 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 (Default):  **“Invalid Selection!”** -  If output for any Int ! 1 through 3 | |

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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 is a value returning method for the amount of Movies-On-Demands.** | | |
| **Method Header** | public int getMoviePurchased() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | moviePurchased |  |
| **Algorithms** | Prompt 1  return moviePurchased; | |

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| **Method Purpose: This is a value returning method for the price of Cable services.** | | |
| **Method Header** | public double getCableSrv() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cableSrv |  |
| **Algorithms** | Prompt 1  cableSrv; | |

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| --- | --- | --- |
| **Method Purpose: This is a value returning method for the type of Cable Package.** | | |
| **Method Header** | public int getCablePkg() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | cablePkg |  |
| **Algorithms** | Prompt 1  return cablePkg | |

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| **Method Purpose: This is a value returning method for the customers name.** | | |
| **Method Header** | public String getCustNm() | |
| **Method Variables** | n/a | |
| **CODE** | | |
| **Prompts** | **Input Variables** | **Input Prompt** |
| **1** | custNm |  |
| **Algorithms** | Prompt 1  Return custNm; | |