# **Award magical bonus pseudocode:**

**Start**

**FUNCTION MagicalBonus(yearsRegistered,** numberOfRentals**)**

IF customerPeriod < 5 AND numberOfRentals < 25 THEN

BEGIN IF

RETURN ” You don’t qualify for magical bonus.”

END IF

ELSE IF customerPeriod >= 5 AND < 10 AND numberOfRentals >= 25 AND < 50 THEN

BEGIN ELSEIF

RETURN ” You qualify for 1 bronze tier book!”

END ELSEIF

ELSE IF customerPeriod >= 10 AND < 15 AND numberOfRentals >= 50 AND < 75 THEN

BEGIN ELSEIF

RETURN ” You qualify for 3 bronze and 1 silver tier books!”

END ELSEIF

ELSE IF customerPeriod >= 15 AND numberOfRentals >= 75 THEN

BEGIN ELSEIF

RETURN” You qualify for 5 bronze, 2 silver and 1 gold tier books!”

END ELSEIF

**End**

# **Award magical bonus IPO chart:**

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| * Number of years as a customer * Number of movies rented for the month | 1. Prompt for number of years as a customer 2. Get Value 3. Prompt for number of rentals for the month 4. Get Value | * You have qualified for 1 bronze tier book! * You Qualify for 3 bronze and 1 silver tier books! * You Qualify for 5 bronze, 2 silver and 1 gold tier books! |

# **Identify Eligible Coupons Pseudo**

**Start**

**FUNCTION Coupons(numRentals)**

IF numRentals > 10 AND numRentals <= 24 THEN

BEGIN IF

RETURN 1

END IF

ELSE IF numRentals > 24 AND numRentals <= 49 THEN

BEGIN ELSEIF

RETURN 2

END ELSEIF

ELSE IF numRentals > 49 AND numRentals <= 74 THEN

BEGIN ELSEIF

RETURN 4

END ELSEIF

ELSE

BEGIN ELSE

RETURN 8

END ELSE

**End**

# **Identify Eligible Coupons IPO table**

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| * Number of rentals from a customer. | 1. Prompt for number of rentals a customer made. 2. Get Value. 3. Determine which rental coupon the customer appropriately falls under. | * 1 Reward rental * 2 Reward Rentals * 4 Reward Rentals * 8 Reward Rentals |

# **THE Pseudo code:**

**Start**

SET spellTomes = 40

SET enchantedScrolls = 25

SET magicalNovels = 25

SET LIST toRent

SET Dictionary magicBooks

SET Dictionary customers

DISPLAY “What would you like to do?

Enter the number to the corresponding option:

============================================

1. Add a new customer

2. Add a new book to the library

3. Take order.

============================================”

SET option = get value

SWITCH option

BEGIN SWITCH

CASE 1

SET newCustomer = “”

DISPLAY “What is the customer’s name?”

newCustomer = get value

IF newCustomer is in the Dictionary customers THEN

BEGIN IF

DISPLAY “This customer already exists.”

END IF

ELSE

BEGIN ELSE

SET registerDate = Present date

ADD newCustomer and date to customers

DISPLAY “The new customer was added successfully.”

END ELSE

CASE 2

SET newBook = “”

SET category = “”

DISPLAY “What is the new book’s name?”

SET newBook = get value

IF magicBooks contains the Key newBook THEN

BEGIN IF

DISPLAY “This book is already in the library”

END IF

ELSE

BEGIN ELSE

DISPLAY “What category does this book fall under?”

SET category = get value

IF category = spell tomes OR enchanted scrolls OR magical novels THEN

BEGIN IF

ADD newBook and category to magicBooks

DISPLAY “newBook was successfully added.”

END IF

ELSE

BEGIN ELSE

DISPLAY “That is not a valid book category”

DISPLAY “Please try again”

END ELSE

CASE 3

//Owethu pseudo

DISPLAY “Checkout For:”

DISPLAY the customer

SET checkout = get value

SET discount = 0

IF checkout is in the Dictionary customers THEN

BEGIN IF

SET sinceRegistered = customer’s register date(date in dictonary) – today’s date

Discount = **CalcDiscount**(sinceRegistered)

END IF

ELSE

BEGIN ELSE

DISPLAY “customer is not on the loyalty list”

END ELSE

//Chris’s pseudo

PROMPT “Enter the Customer’s number of rentals”

SET numRentals = get value

SET rewardRentals = **Coupons**(numRentals)

//Warick’s pseudo

SET magicBonus = **MagicBonus**(sinceRegistered, numRentals)

DEFAULT

DISPLAY “That is not an available option”

END SWITCH

SET totalAmount = 0;

DO

Display “Enter the book’s name to be rented”

DISPLAY “Enter a 0 to stop the book selection”

SET book = get value

IF book is in the customers dictionary THEN

BEGIN IF

ADD book to the List toRent

totalAmount = totalAmount + price of book(determined by it’s category)

END IF

ELSE

BEGIN ELSE

DISPLAY “That book doesn’t exist”

END ELSE

WHILE book is not 0

SETd discountAmount = totalAmount / discount

DISPLAY “Magic books Library”  
 DISPLAY “========================”

DISPLAY “Total before discount totalAmount”

DISPLAY “Discount discountAmount”

DISPLAY “Coupons rewardRentals”

DISPLAY “Magic bonuses magicBonus”

**End**