In Class Chapter 4 – Page 171 - #6

# Problem Statement

Serendipity Booksellers’ book club awards points to customers based on the number of books purchased each month as follows:

* If a customer purchases 0 books, 0 points are earned.
* If a customer purchases 1 book, 5 points are earned.
* If a customer purchases 2 books, 15 points are earned.
* If a customer purchases 3 books, 30 points are earned.
* If a customer purchases 4 or more books, 60 points are earned.

Design a program that includes a CASE structure to:

# Algorithm

1. Get the number of books purchased
2. Determine the number of points awarded
3. Display the number of points awarded

# IPO Diagram

Skipped for this problem

# Hierarchy Chart

# Flowchart

# Pseudocode

// Program: In Class Chapter 4 - Page 171 - #6 MDoctor

// Author: Mark Doctor

// Course: iTech

void main ()

{

DISPLAY "Please enter the number of books purchased: ";

INPUT numBooks;

SET rewards = points (numBooks);

DISPLAY "Congratulations! Your purchases earned you ", rewards, " points!";

}

Integer points (Integer books)

{

if (books = 0)

{

numPoints = 0;

}

else

if (books == 1)

{

numPoints = 5;

}

else

if (books == 2)

{

numPoints = 15;

}

else

if (books == 3)

{

numPoints = 30;

}

else

numPoints = 60;

return numPoints;

}

# Pseudocode with Case Structure

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void main ()

{

DISPLAY "Please enter the number of books purchased: ";

INPUT numBooks;

SET rewards = points (numBooks);

DISPLAY "Congratulations! Your purchases earned you ", rewards, " points!";

}

Integer points (Integer books)

{

Select books

CASE 0: SET numPoints = 0;

CASE 1: SET numPoints = 5;

CASE 2: SET numPoints = 15;

CASE 3: SET numPoints = 30;

CASE 4: SET numPoints -=60;

DEFAULT: SET numPoints = 60;

END SELECT

}

# Java Source Code

# Java Source Code (using CASE structure)