**package** edu.bailey.program6;

**import** java.util.Scanner;

/\*\*

\* FILENAME : LemonadeStand.java

\* PURPOSE : To calculate individual sales for a lemonade stand.

\* **@author** : Taylor Bailey

\*/

**public** **class** LemonadeStand

{//Start Main Method

**public** **static** **void** main(String[] args)

{

Scanner input = **new** Scanner(System.***in***);

//Declare variables

**char** product = ' ';

**char** drinkSize = ' ';

**double** drinkCost = 0.0;

**char** cookieType = ' ';

**double** COOKIE\_COST = 0.75;

**char** shirtType = ' ';

**double** shirtCost = 0.0;

**int** totalTransactions = 0;

**double** totalSales = 0.0;

**int** SMALL\_OZ = 12;

**int** MED\_OZ = 16;

**int** totalLemonade = 0;

**int** totalChocolateChip = 0;

**int** totalOatmeal = 0;

**int** totalAutographed = 0;

**int** totalNonAutographed = 0;

**char** runProgram = ' ';

//Welcome message

System.***out***.println("Welcome to the Lemonade Stand sales calculation program!");

System.***out***.println("Please enter your product type, first character only.");

//Ask if the user wants to input a sale

System.***out***.println("Please enter a Y if you want to input a sale or enter a N to quit.");

runProgram = input.nextLine().charAt(0);

runProgram = Character.*toUpperCase*(runProgram);

// Check for a valid response of N or Y

**while** (runProgram != 'N' && runProgram != 'Y')

{

System.***out***.printf("\n%s", "Invalid entry, please enter Y to calculate a sale or N to quit.");

runProgram = input.nextLine().charAt(0);

runProgram = Character.*toUpperCase*(runProgram);

}

**while** (runProgram == 'Y')

{

//Get Menu Selection

product = *getProduct*();

//Get Cup Size

drinkSize = *getDrinkSize*(product);

//Get Cup Price

drinkCost = *getDrinkCost*(drinkSize);

//Lemonade accumulators

**if** (drinkSize == 'S')

{

//Count

totalLemonade = totalLemonade + SMALL\_OZ;

totalSales = totalSales + drinkCost;

}

**else** **if** (drinkSize == 'M')

{

//Count

totalLemonade = totalLemonade + MED\_OZ;

totalSales = totalSales + drinkCost;

}

//Get Cookie Type

cookieType = *getCookieType*(product);

//Get Shirt Type

shirtType = *getShirtType*(product);

//Get Shirt Price

shirtCost = *getShirtCost*(shirtType);

//Shirt accumulators

**if** (shirtType == 'A')

{

totalAutographed = totalAutographed + 1;

totalSales = totalSales + shirtCost;

}

**else** **if** (shirtType == 'R')

{

//Count

totalNonAutographed = totalNonAutographed +1;

totalSales = totalSales + shirtCost;

}

//Get Cookie Type/Cost

**if** (cookieType == 'C')

{

//Count

totalChocolateChip = totalChocolateChip + 1;

totalSales = totalSales + COOKIE\_COST;

//Display product and cost

System.***out***.println("Item purchased: Chocolate Chip Cookie");

System.***out***.printf("Item Price: $%.2f%n", COOKIE\_COST);

}

**else** **if** (cookieType == 'O')

{

//Count

totalOatmeal = totalOatmeal + 1;

totalSales = totalSales + COOKIE\_COST;

//Display product and cost

System.***out***.println("Item purchased: Oatmeal Cookie");

System.***out***.printf("Item Price: $%.2f%n", COOKIE\_COST);

}

//Calculate transactions and sales

totalTransactions = totalTransactions + 1;

// Ask if the user wants to input another sale

System.***out***.printf("Please enter Y if you want to input another sale or enter N to quit.");

runProgram = input.nextLine().charAt(0);

runProgram = Character.*toUpperCase*(runProgram);

// Check for a valid response of N or Y

**while** (runProgram != 'N' && runProgram != 'Y')

{

System.***out***.printf("\n%s", "Invalid entry, please enter Y to input another sale or N to quit.");

runProgram = input.nextLine().charAt(0);

runProgram = Character.*toUpperCase*(runProgram);

}

} //End while for runProgram

**if** (runProgram == 'N')

{

System.***out***.println("Total Transactions - " + totalTransactions);

System.***out***.printf("Total Sales - $%.2f%n", totalSales);

System.***out***.println("Total Ounces of Lemonade Sold - " + totalLemonade);

System.***out***.println("Total Chocolate Chip Cookies Sold - " + totalChocolateChip);

System.***out***.println("Total Oatmeal Cookies Sold - " + totalOatmeal);

System.***out***.println("Total Autographed T-Shirts Sold - " + totalAutographed);

System.***out***.println("Total Non-Autographed T-Shirts Sold - " + totalNonAutographed);

}

System.***out***.println("Thank you for using the Lemonade Stand sales calculation program! Goodbye!");

}//End of main method

//Get Menu Selection

/\*\*

\* Input product. Accept only L, C, S, or Q

\* **@return** One of the five characters, shown above

\*/

**public** **static** **char** getProduct()

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Menu Selection

**char** aProduct = ' ';

//Get Menu Selection

System.***out***.println("Enter a product or Q to quit.");

System.***out***.println("L for Lemonade, C for Cookie, or S for T-Shirt.");

aProduct = input.nextLine().charAt(0);

aProduct = Character.*toUpperCase*(aProduct);

//If product is not one of the acceptable characters, get another!

**while** (aProduct != 'L' && aProduct != 'C' && aProduct != 'S' && aProduct != 'Q')

{

System.***out***.println("Invalid input.");

System.***out***.print("Enter a product or Q to quit (L,C,S,Q);: ");

aProduct = input.nextLine().charAt(0);

aProduct = Character.*toUpperCase*(aProduct);

}

//Return Menu Selection

**return** aProduct;

}//END MENU SELECTION

//Get Cup Size

/\*\*

\* Input Cup Size if Lemonade is selected. Accept only S, M, or Q

\* **@param** aProduct to provide product selection

\* **@return** Drink size desired

\*/

**public** **static** **char** getDrinkSize(**char** aProduct)

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Drink Size

**char** aDrinkSize = ' ';

**if** (aProduct == 'L')

{

System.***out***.println("Please input desired drink size (S for small (12 oz), M for Medium (16 oz), Q to quit).");

aDrinkSize = input.nextLine().charAt(0);

aDrinkSize = Character.*toUpperCase*(aDrinkSize);

//If drinkSize is not one of the acceptable characters, get another!

**while** (aDrinkSize != 'S' && aDrinkSize != 'M' && aDrinkSize != 'Q')

{

System.***out***.println("Invalid input.");

System.***out***.print("Enter a drink size or Q to quit (S,M,Q).");

aDrinkSize = input.nextLine().charAt(0);

aDrinkSize = Character.*toUpperCase*(aDrinkSize);

}

}//END IF

**return** aDrinkSize;

}//END DRINK SIZE

//Get Cup Price

/\*\*

\* Calculates cup price based on size selected

\* **@param** aDrinkSize for calculating aDrinkCost

\* **@return** Drink cost

\*/

**static** **double** getDrinkCost(**char** aDrinkSize)

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Cup Price

**double** aDrinkCost = 0.0;

//Get Cup Price

**if** (aDrinkSize == 'S')

{

aDrinkCost = 1.50;

//Display product and cost

System.***out***.println("Item purchased: 12 Ounce Lemonade");

System.***out***.printf("Item Price: $%.2f%n", aDrinkCost);

}

**else** **if** (aDrinkSize == 'M')

{

aDrinkCost = 2.00;

//Display product and cost

System.***out***.println("Item purchased: 16 Ounce Lemonade");

System.***out***.printf("Item Price: $%.2f%n", aDrinkCost);

}

//Return Drink Cost

**return** aDrinkCost;

} //END DRINK COST

//Get Cookie Type

/\*\*

\* Input cookie type desired. Accept only C, O, or Q

\* **@param** aProduct to provide product selection

\* **@return** Cookie type

\*/

**static** **char** getCookieType(**char** aProduct)

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Cookie Type

**char** aCookieType = ' ';

//Get Cookie Type

**if** (aProduct == 'C')

{//Start Cookie if

System.***out***.println("Please input desired cookie type (C for Chocolate Chip, O for Oatmeal, Q for Quit).");

aCookieType = input.nextLine().charAt(0);

aCookieType = Character.*toUpperCase*(aCookieType);

//If cookieType is not one of the acceptable characters, get another!

**while** (aCookieType != 'C' && aCookieType != 'O' && aCookieType != 'Q')

{

System.***out***.println("Invalid input.");

System.***out***.print("Enter a cookie type or Q to quit (C,O,Q).");

aCookieType = input.nextLine().charAt(0);

aCookieType = Character.*toUpperCase*(aCookieType);

}

}

//Return Cookie Type

**return** aCookieType;

}//END COOKIE TYPE

//Get Shirt Type

/\*\*

\* Input shirt type. Accept only A, R, or Q

\* **@param** aProduct to provide product selection

\* **@return** Shirt type

\*/

**static** **char** getShirtType(**char** aProduct)

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Shirt Type

**char** aShirtType = ' ';

//Get Shirt Type

**if** (aProduct == 'S')

{//Start Shirt if

System.***out***.println("Please input the shirt type being purchased (A for autographed, R for regular, Q for Quit).");

aShirtType = input.nextLine().charAt(0);

aShirtType = Character.*toUpperCase*(aShirtType);

//If shirtType is not one of the acceptable characters, get another!

**while** (aShirtType != 'A' && aShirtType != 'R' && aShirtType != 'Q')

{

System.***out***.println("Invalid input.");

System.***out***.print("Enter a shirt type or Q to quit (A,R,Q).");

aShirtType = input.nextLine().charAt(0);

aShirtType = Character.*toUpperCase*(aShirtType);

}

}

//Return Shirt Type

**return** aShirtType;

}//END SHIRT TYPE

//Get Shirt Price

/\*\*

\* Calculates the shirt cost once type is chosen

\* **@param** aShirtType for calculating the correct cost

\* **@return** Shirt cost

\*/

**public** **static** **double** getShirtCost(**char** aShirtType)

{

//Create a scanner object for input

Scanner input = **new** Scanner(System.***in***);

//Local variable to hold Shirt Price

**double** aShirtCost = 0.0;

//Get Shirt Cost

**if** (aShirtType == 'A')

{

aShirtCost = 15.00;

//Display product and cost

System.***out***.println("Item purchased: Autographed Shirt");

System.***out***.printf("Item Price: $%.2f%n", aShirtCost);

}

**else** **if** (aShirtType == 'R')

{

aShirtCost = 8.00;

//Display product and cost

System.***out***.println("Item purchased: Non-Autographed Shirt");

System.***out***.printf("Item Price: $%.2f%n", aShirtCost);

}

//Return Shirt Cost

**return** aShirtCost;

}//END SHIRT COST

}