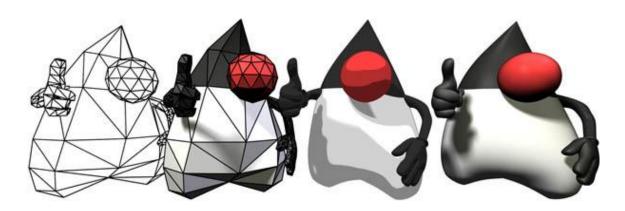# Java Assignment 4: Array Practice Budget System

Making a monthly budget can help a family gain a realistic idea of how much they can afford to spend in a given month. For this project, you will allow a user to input in their annual salary.

You will give the user a menu with 5 different options;
Display Sample Budget 1
Display Sample Budget 2
Enter Actual Budget
Display Actual Budget
Exit

You will figure out their monthly salary and allow them to input a series of categories followed by amounts. The first three budget categories and amounts for all budgets will be as follows;

Federal Income Tax	Use 12 % for all
NY State Income Tax	Use 6% for all
Social Security and Medicare	Use 7.5% for all

Other categories and amounts will be in actual dollars, not percentages.
NOTE: Please round off to the nearest DOLLAR, no cents for monthly budget amounts!!!!

Example;

Enter Choice
1- Display Sample Budget 1
2-Display Sample Budget 2
3-Enter Actual Budget
4-Display Actual Budget
5-Exit

1
Here is your sample budget for 4000 monthly
--

Item#	**Amount**	**Item**
----	---------	----
1	**480**	**FIT**
2	**240**	**NYS**
3	**300**	**SS**
4	**1200**	**Mortgage**
5	**500**	**Food**
6	**80**	**Auto Insurance**
7	**300**	**Auto Payment**
8	**200**	**Student Loan**
9	**200**	**Investment**
10	**250**	**Heat/Electric**
11	**130**	**Cable/Phone/Internet**
12	**80**	**Mobile Phone**
13	**40**	**Misc**
14	**0**	**null**
15	**0**	**null**

2
Here is your sample budget for 3000 monthly
--

Item#	**Amount**	**Item**
----	---------	----
1	**360**	**FIT**
2	**180**	**NYS**
3	**225**	**SS**
4	**750**	**Rent**
5	**500**	**Food**

6	80	Auto Insurance
7	30	Dog Food
8	120	Entertainment
9	300	Savings
10	14	World of Warcraft
11	130	Cable/Phone/Internet
12	80	Mobile Phone
13	200	Auto Repair
14	69	Misc
15	0	null

3
Please enter annual salary->48000

Here is your monthly income -> 4000

FIT	**480**
NYS	**240**
SS	**300**

Amount Left: 2980

Please enter in a category to add or q to quit->
Mortgage
Please enter in an amount->
1200
Amount Left: 1780

Please enter in a category to add or q to quit->
Food
Please enter in an amount->
500

Amount Left: 1280

Please enter in a category to add or q to quit->
Auto Insurance
Please enter in an amount->
80

etc...

Please enter in a category to add or q to quit->
q

4
Here is your budget for 4000 monthly

Item#	Amount	Item
1	480	FIT
2	240	NYS
3	300	SS
4	1200	Mortgage
5	500	Food
6	80	Auto Insurance
7	300	Auto Payment
8	150	Charity
9	200	Investment
10	250	Heat/Electric
11	130	Cable/Phone/Internet
12	80	Mobile Phone
13	90	Misc
14	0	null
15	0	null

Use four arrays for the sample budgets. Two will hold the categories(Strings) and two will hold the amounts (doubles).

Use two arrays to store the category information for the budget.
A String array for the category names and a double array for the category amounts. Fix the arrays at size 15.

To enter in the sample budget information, use the following technique
public static void main(String[ ] args) {

  String sampCat1[ ] = new String[15]; //declare an array of 15 Strings
  double sampAmt1[ ] = new double[15]; //declare an array of doubles for amts

  sampCat1[0] = "Federal Income Tax";

```
sampleAmt[0] = 480;
//etc

while (true) {
    //Print out menu items and process user inputs
```

You can save the annual salary in a variable and then figure out the monthly salary to work with.

The first 3 items must be as they appear above and should be figured as a percentage of the monthly salary. Starting at the 4th element in the array, allow the user to enter in a category name followed by an amount.

Then allow them to enter another until they either type in q to quit or reach 14 items. The last category will be misc and will have the remaining money available if any.

In order to loop through and ask the user to enter in data, try the following;

```
int item = 3;
while(item < 14) {  //reserve 14 for the Miscellaneous
        System.out.println("Enter category name or q to quit");
        input.skip("\n");
        String temp = input.nextLine();  //reads Strings that include spaces

        if(temp.equals("q")) {
                break;  //exits loop
        }
        ...


}
```
When the person presses q or uses up 14 items, assign the **first unused budget** category to be misc and use the remaining amount of money available for the misc category.
If a user has less than 14 categories, just set the rest to amount 0 with no description

Print out a summary of the budget by printing all categories and amounts

BONUS: Using a graphical JFrame, display a pie chart with a key for each category. See the example program from Mr. Hanley's web site
Note: you must have all 360 degrees, can't round off and leave less

Project Name	Assign 4 – Family Budget
Class Name	Budget

Rubric	
Figures monthly income accurately	20
Figures FIT, State Tax and SS	20
Allows inputs up to 14 categories	25
Allows user to quit early	10
Prints budget accurately	15
Assigns Misc to FIRST unused category	10
TOTAL	100
BONUS – pie chart	15