1.Mortgage calculator java

package com.codewithme;  
  
  
 import java.text.NumberFormat;  
import java.util.Scanner;  
  
public class Main {  
  
 public static void main(String[] args) {  
final int year=12;  
final int percent=100;  
 Scanner scanner= new Scanner(System.in);  
 System.out.print("Principal:");  
 double principal\_value= scanner.nextDouble();  
  
 System.out.print("Annual Interest Rate:");  
 double ANR\_value= scanner.nextFloat();  
 double MIR\_value= (ANR\_value/percent)/year; // monthly income value calculated by ((annual income rate )divide by100) multiply year (12)  
  
  
 System.out.print("Period(year):");  
 int year\_value= scanner.nextInt();  
 int numberOfPay= year\_value\*year; // n= year value \*12(year constant)  
  
 System.out.print("Mortgage:");  
 double Mortgage= principal\_value\* (MIR\_value\* (Math.pow(1+MIR\_value,numberOfPay)) ) / ((Math.pow(1+MIR\_value,numberOfPay))-1); //formula of mortgage  
  
 String mortgageFormatted = NumberFormat.getCurrencyInstance().format(Mortgage); // converted the value of mortgage int0 currency  
  
 System.out.println("Mortgage value:"+ mortgageFormatted);  
  
  
 // in this majorly I have used the formatting numbers and reading inputs  
  
  
  
  
 }  
}

2.Mortgage calculator (flow of control loops if else and break continue)

package com.codewithme;  
  
import java.text.NumberFormat;  
import java.util.Scanner;  
  
public class Main {  
 final static int *year* = 12;  
 final static int *percent* = 100;  
  
 public static void main(String[] args) {  
  
 int principal\_value = 0;  
 double ANR\_value = 0;  
 double MIR\_value=0;  
 int year\_value=0;  
 int numberOfPay=0;  
  
  
 Scanner scanner = new Scanner(System.*in*);  
 while (true) {  
 System.*out*.print("Principal(1k-1M):");  
 principal\_value = scanner.nextInt();  
 if (principal\_value >= 1000 && principal\_value <= 1\_000\_000) {  
 break;  
 } else if (principal\_value < 1000) {  
 System.*out*.println("Principal value is less than 1000 take between 1K to 1M");  
 continue;  
 } else  
 System.*out*.println("Principal value is more than 1\_000\_000 take between 1K to 1M");  
 continue;  
 }  
  
  
 while (true) {  
 System.*out*.print("Annual Interest Rate (1-30):");  
 ANR\_value = scanner.nextDouble();  
 if (ANR\_value > 0 && ANR\_value <= 30) {  
 MIR\_value = (ANR\_value / *percent*) / *year*;  
 break;  
 }else if(ANR\_value<=0) {  
 System.*out*.println("equal or below to 0. So take between 1-30");  
 continue;  
 }  
 else  
 System.*out*.println("More or above to 30. So take between 1-30");  
 continue;  
  
 // monthly income value calculated by ((annual income rate )divide by100) multiply year (12)  
 }  
  
 while(true) {  
 System.*out*.print("Period(year(1-30)):");  
 year\_value = scanner.nextInt();  
 if (year\_value > 0 && year\_value <= 30){  
 numberOfPay = year\_value \* *year*;  
 break;  
 }  
 else if (ANR\_value <= 0) {  
 System.*out*.println("take between 1-30");  
 continue;  
 }  
 else  
 System.*out*.println("take between 1-30");  
 continue;  
 }  
 // n= year value \*12(year constant)  
  
 System.*out*.print("Mortgage:");  
 double Mortgage = principal\_value \* (MIR\_value \* (Math.*pow*(1 + MIR\_value, numberOfPay))) / ((Math.*pow*(1 + MIR\_value, numberOfPay)) - 1); //formula of mortgage  
 String mortgageFormatted = NumberFormat.*getCurrencyInstance*().format(Mortgage); // converted the value of mortgage int0 currency  
 System.*out*.println("Mortgage value:" + mortgageFormatted);  
  
  
 // in this majorly I have used the formatting numbers and reading inputs  
  
  
 }  
  
  
}

3. Mortgage calculator (clean code creating new method -before ones )

public static void main(String[] args) {  
 Scanner scanner= new Scanner(System.*in*);  
 System.*out*.print("Principal:");  
 double principal\_value= scanner.nextDouble();  
  
 System.*out*.print("Annual Interest Rate:");  
 double ANR\_value= scanner.nextFloat();  
  
 System.*out*.print("Period(year):");  
 int year\_value= scanner.nextInt();  
  
double Mortgage= mortgageValue(principal\_value,ANR\_value,year\_value);  
 String mortgageFormatted= NumberFormat.*getCurrencyInstance*().format(Mortgage);  
 System.*out*.println("Mortgage value:"+ mortgageFormatted);  
  
  
 } // this method is public and the value that are assigned is totally accessible by the another method  
  
public static double mortgageValue(  
 double principal\_value,  
 double ANR\_value,  
 int year\_value ){  
  
 final int year=12;  
 final int percent=100;  
 double MIR\_value= (ANR\_value/percent)/year;  
 int numberOfPay= year\_value\*year;  
 double Mortgage= principal\_value\* (MIR\_value\* (Math.*pow*(1+MIR\_value,numberOfPay)) ) / ((Math.*pow*(1+MIR\_value,numberOfPay))-1);  
  
 return Mortgage;  
}

4. Rock paper scissor game with if else

package com.codewithme;  
  
import java.util.Random;  
import java.util.Scanner;  
  
public class Main {  
  
 public static void main(String[] args) {  
 Scanner scan= new Scanner(System.*in*);  
 System.*out*.println("Choose Rock:1, Paper:2, Scissor:0");  
 int youChoose= scan.nextInt();  
  
 System.*out*.println("Computer's Turn");  
 Random random= new Random();  
 int computerChoose= random.nextInt(3);  
  
 if(youChoose==computerChoose){  
 System.*out*.println("Game Draw");  
 }  
 else if((youChoose==2 && computerChoose==1) || (youChoose==0 && computerChoose==2)  
 || (youChoose==1 && computerChoose==0)){  
 System.*out*.println();  
  
 System.*out*.println("\*\*You Win!\*\*");  
 System.*out*.println("CONGRATULATIONS! WELL PLAYED");  
 }  
 else{  
 System.*out*.println();  
 System.*out*.println("\*\*Computer win!\*\*");  
 System.out.println("PLAY AGAIN TO WIN THIS TIME");  
  
  
 }  
 // to know what was the choice of computer  
 if (computerChoose==0) {  
 System.out.println("Computer chose "+ computerChoose + " Scissor");  
  
 }  
 else if(computerChoose==1) {  
 System.*out*.println("Computer chose "+ computerChoose + " Rock");  
  
 }  
 else {  
 System.*out*.println("Computer chose "+ computerChoose + " Paper");  
  
 }  
 System.*out*.println();  
 System.*out*.println("!!GAME OVER!!");  
  
 }  
}

5. Game guess number upto 100 with help of oops (constructor, methods class new object)

package com.codewithme;  
  
  
import java.util.Random;  
import java.util.Scanner;  
  
class Game {  
 public int guess=0;  
 public int userInput;  
 public int computerInput;  
  
  
 public int getGuess() {  
 return guess;  
 }  
  
 public void setGuess(int guess) {  
 this.guess = guess;  
 }  
  
  
 public Game(){  
 Random random= new Random();  
 this.computerInput= random.nextInt(100);  
 System.*out*.println("Let's Start The Game");  
 System.*out*.println();  
  
 }  
  
  
  
 public void takeUserInput() {  
  
 System.*out*.println("Guess a Number:");  
 Scanner scan= new Scanner(System.*in*);  
 userInput=scan.nextInt();  
  
  
 }  
  
  
  
 public boolean isCorrectnumber() {  
 guess++;  
 if(userInput>computerInput){  
 System.*out*.println("You guessed bigger than computerInput Number");  
 return false;  
 }  
 else if(userInput<computerInput){  
 System.*out*.println("You guessed smaller than computerInput number");  
 return false;  
 }  
 else{  
 System.*out*.println("Equal to computerInput number");  
 System.*out*.println("CONGRATULATIONS! You guessed Right it's "+computerInput+" And you guessed it in "+ guess +" times");  
 return true;  
 }  
  
  
 }  
  
  
}  
  
  
public class GuessNumberGame {  
 public static void main(String[] args) {  
 Game oneTime= new Game();  
  
 boolean runUpto=false;  
 while (!runUpto){  
 oneTime.takeUserInput();  
 runUpto=oneTime.isCorrectnumber();  
 System.*out*.println(runUpto);  
 }  
 System.*out*.println();  
 System.*out*.println("GAME OVER!! PLAY AGAIN");  
 }  
}