# Directions

1. Use the following as a guide to prepare you for the upcoming exam.
2. Screenshot where directed.
3. Submit whatever you feel is important to Blackboard. I will not look at your submission, you will earn full points for any submission.

# How to prepare

* Retake the weekly reading worksheets on BlackBoard
* Review your code and content in chapters 7 – 11
* Write sample code to practice your skills

# A General List of Topics Covered

* Strings
* String manipulation
* String class
* String Builder
* Arrays
* Populating, parsing, printing, performing calculations on Arrays
* ArrayLists
* Sorting Arrays and Arraylists
* Arrays and ArrayLists of objects
* Populating, parsing, printing, performing calculations on Arrays
* Creating classes with constructors, setters/getters, toString
* Adding methods to classes
* Automating property settings of classes in constructors and setters
* Inheriting classes to expand functionality
* Overriding parent methods
* Creating abstract classes and methods
* Inheriting from abstract classes and methods
* Creating and using interfaces
* Comparators

## Some practice exercises

Do as many of these as you want. I suggest focusing on those that you do not understand well.

You will have to complete several of these on the midterm. I will allow you to choose which you want to perform.

public class Strings {  
 public static void main(String[] args) {  
 String p = "Hello there this is Colin Downing";  
 StringBuilder easier = new StringBuilder(p);  
 int vow =0;  
  
  
 for(int x=0;x<10;x++)  
 {  
 System.*out*.print(p.charAt(x));  
 }  
  
 System.*out*.println();  
  
 for(int y=p.length()-11;y<p.length()-1;y++)  
 {  
 System.*out*.print(p.charAt(y));  
 }  
  
 for(int x =0; x<p.length();x++)  
 {  
 if(p.charAt(x)=='A'||p.charAt(x)=='a'|| p.charAt(x)=='E' || p.charAt(x)=='e' || p.charAt(x)=='I' || p.charAt(x)=='i' || p.charAt(x)=='O' || p.charAt(x)=='o' || p.charAt(x)=='U' || p.charAt(x)=='u')  
 {  
 vow++;  
 }  
 }  
  
 System.*out*.println(vow + " vowels");  
  
  
 for(int x=0; x<easier.length();x++)  
 {  
 if(easier.charAt(x)=='E' || easier.charAt(x)=='e')  
 {  
 easier.replace(x,x+1,"3");  
 }  
 }  
  
 System.*out*.println(easier);  
  
  
  
 }  
}

public class Product {  
 protected String name;  
 protected double price;  
  
 public Product() {  
 }  
  
 public Product(String name, double price) {  
 this.name = name;  
 this.price = price;  
 }  
  
 public String getName() {  
 return name;  
 }  
  
 public void setName(String name) {  
 this.name = name;  
 }  
  
 public double getPrice() {  
 return price;  
 }  
  
 public void setPrice(double price) {  
 this.price = price;  
 }  
  
 @Override  
 public String toString() {  
 return "Product{" +  
 "name='" + name + '\'' +  
 ", price=" + price +  
 '}';  
 }  
}

public class Arrays {  
 public static void main(String[] args) {  
 double[] nums = {3.4545,2.4565,7.435345,1.23432,9.2434};  
// double avg=0;  
//  
// for(int x =0;x<nums.length;x++)  
// {  
// avg+=nums[x];  
// }  
// avg=avg/nums.length;  
// System.out.println(avg);  
//  
// double max = nums[0];  
// for(int x=0; x<nums.length;x++)  
// {  
// if(nums[x]>max)  
// max=nums[x];  
// }  
// System.out.println(max);  
//  
// double min = nums[0];  
// for(int x=0; x<nums.length;x++)  
// {  
// if(nums[x]<min)  
// min=nums[x];  
// }  
// System.out.println(min);  
  
 boolean check = false;  
 double n = 1.23432;  
 for(int x=0;x<nums.length;x++)  
 {  
 if(nums[x]==n)  
 check=true;  
 }  
 if(check==true)  
 System.*out*.println(n + " is in the array");  
 else  
 System.*out*.println(n + " is not in the array");  
  
  
 }  
}

import java.util.ArrayList;  
  
public class ProductReview extends Product{  
 private ArrayList<String> reviews = new ArrayList<String>();  
  
 public ProductReview(String name, double price, ArrayList<String> reviews) {  
 super(name, price);  
 this.reviews = reviews;  
 }  
  
 public ArrayList<String> getReviews() {  
 return reviews;  
 }  
  
 public void setReviews(ArrayList<String> reviews) {  
 this.reviews = reviews;  
 }  
  
 public void addReview(String r)  
 {  
 this.reviews.add(r);  
 }  
  
  
 @Override  
 public String toString() {  
 return super.toString() +  
 "reviews=" + reviews +  
 '}';  
 }  
}