

CT1: CSE 203 - Object-Oriented Programming I: Java

Time: 30 min

Mark: 20

Name:

ID:

Question 1:

[12]

Define a class and name it as **"Shark"**. Add the following inside the class.

1. Define instance variables ***species***, ***color***, ***weight***
2. Add a parameterized **constructor** which will take 3 parameters. Inside the constructor initializes the attributes with the parameters passed to the constructor.
3. Add the following methods.
 - a. `public void hunt(String prey, double pWgt)`
 - Inside the method, print "***species*** like to hunt ***prey***." where ***species*** is the value of the ***species*** attribute and ***prey*** is the value of the parameter passed to the method. Also increase the ***weight*** by ***pWgt*** amount.
 - b. `public double getWeight()`
 - the method should return the ***weight*** attribute.
 - c. `public void display()`
 - inside the method, print the value of all three attributes.

Question 2:

[8]

Define a class and name it as **"Zoo"**. Define the **main** method inside the class. Inside the main, do the following.

1. Create an object of **Shark** class ***species***="Whale Shark", ***color***="gray and white" and ***weight*** =last 4 digits of your registration number. Store the reference to a variable name ***shark***.
2. Call the **hunt(...)** method using the ***shark*** variable and pass ***"fish"*** and last digit of your id as the parameters of the method.
3. Call the **display(...)** method using the ***shark***.
 - What is the output of this method?

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Question 1:

[12]

Define a class and name it as “**Movie**”. Add the following inside the class.

1. Define instance variables **name**, **duration**, **rank**
2. Add a parameterized **constructor** which will take 3 parameters for the 3 attributes. Inside the constructor initializes the respective attributes with the parameters passed to the constructor.
3. Add the following methods.
 - a. `public void reviewThisMovie(boolean isGood, double score)`
 - Inside the method, increase the **rank** by **score** amount if **isGood** is true. If **isGood** is false, decrease the **rank** by **score** amount. Here **rank** are instance variables where as **isGood** and **score** are the values of the parameters passed to the method.
 - b. `public int getRank()`
 - the method should return the **rank** attribute.
 - c. `public void display()`
 - inside the method, print the value of all three attributes.

Question 2:

[8]

Define a class and name it as “**MovieContest**”. Define the **main** method inside the class. Inside the main, do the following.

1. Create an object of **Movie** class **name**=your name, **duration** = last 2 digits of your registration number, and **rank** =last digit of your registration number. Store the reference to a variable name **myMovie**.
2. Call the **reviewThisMovie(...)** method using the **myMovie** variable and pass true and **3** as the parameters of the method.
3. Call the **display(...)** method using the **myMovie**.
 - What is the output of this method?