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Design pattern

Assignment

1) Different between class and component

→ class emphasize a design-time enviroment, while components are more oriented toward a run-time enviroment.

- A components is a collection of objects that furnish a set of offerings to different system. A class is a template or blueprint.

2) How many basic primary data type supported by java ?

→

1) int
2) float
3) char
4) boolean
5) string

3) what is the different between object data and value data.

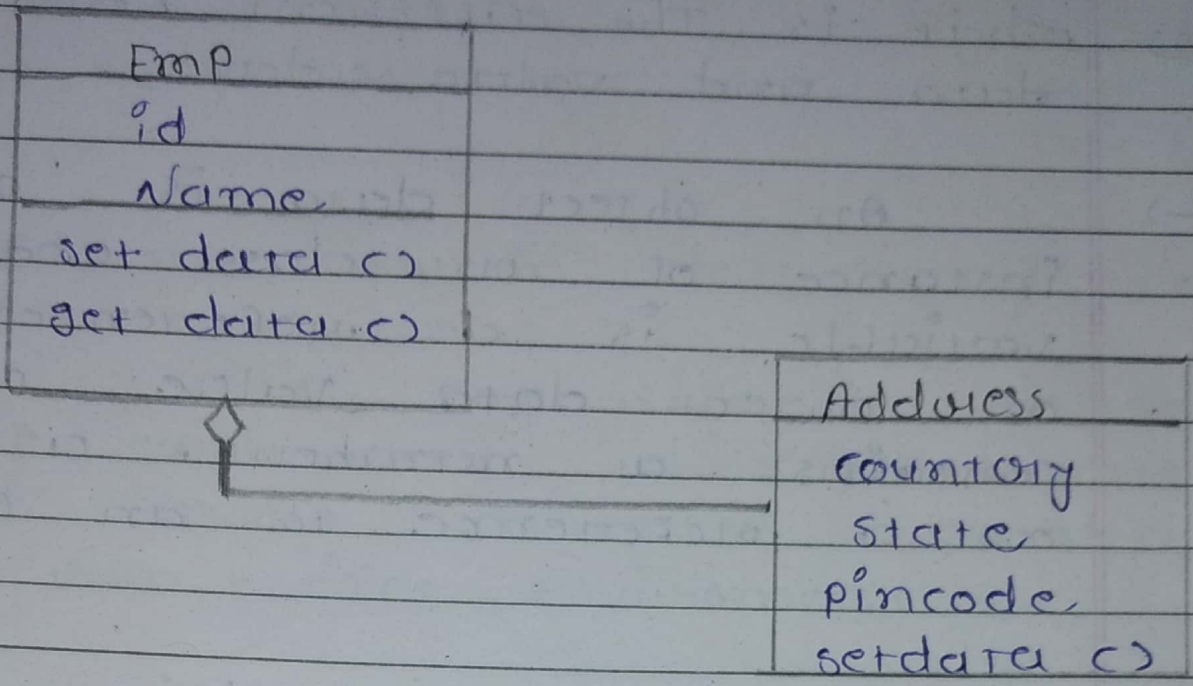
→ An object data is an instance of a class and a variable is a references to an object data value data contains a number, a character or a reference to an object.

4) what is default modifier of class, variable, and method?

→ Default Access modifier is the default modifier of class methods and variable.

5) create any two class show the relationship of agrigation and write another two class to show the relation ship of composition.

→ Diagram :-



Aggregation . java

```
class Address
{
    String country, state;
    int pincode;

    public setdata (String country,
                    String state, int pincode)

    {
        This . country = country;
        This . State   = State;
        This . pincode = pincode;

    } // setdata () over

} // Address class over
```

```
Class Emp
{
    int id;
    string name;
    Address addr;

    public setdata (int id, string
                    name, Address addr)
    {
        this.id = id;
        this.name = name;
        this.addr = addr;
    }
    void getdata()
    {
        System.out.println("ID" + id);
        System.out.println("Nam is"
                           + name);
        System.out.println("country is"
                           + add", country);
        System.out.println("state is" +
                           addr.state);
        System.out.println("pincode is" +
                           addr.pincode);
    } // getdata() over

    public static void main(string
                            args[])
    {
```

```
Address add = new address
        (365480, "India", "Gujarat");
Emp em = new Emp (1, "Shivali",
                        add);
em.getdata();

} // main () over

} // Emp class over
```

* output *

```
ID    1
Name is Shivali
Country is India
State is Gujarat
pincode is 365480
```

Composition Example

```
public class Job {

    private String role;
    private long salary;
    private int id;

    public String getRole () {
      return role;
    }
```

```
public void setRole (string role){
 this.role = role;
}
 public long getsalary (){
 return salary;
}
 public void setsalary (long salary){
 this.salary = salary;
}
 public int getID (){
 return id;
}
 public void setId (int id){
 This.id = id;
}
public class person {

 private Job job;

 public person (){
  This.Job = new Job ();
  Job.setsalary (1000)
 }

 public long get salary (){
  return Job.getsalary ();
 }
```

```
public class Testperson {
    public static void main (String
                              [] args ) {
    person per = new person ();
    long salary = per.getsalary ();
    System.out.println ("salary of
                        person :" + salary );
    }
}
```

* output *

salary of person : 1000

6) is There any other way to create The class instance without new keyword.

⟹ yes, we can create class instance without new keyword using Following way.

- using clone

we can also use clone() method to create a copy of an existing object

- using object Deserialization

object deserialization can also be used to create an object it produces the opposite of serializing an object.

- using class Loader

we can also use classLoader to create The object of a class This way is much the same as class forName option.

Date

7) what is constructor modifier by default ?

if The class is declared public Then The default constructor is implicity given The access modifier public.

if The class is declared protected, Then The default constructure is implicity given The access modifier protected

if The class is declared private then The default construction is implicity given The access modifier private,

other wise The default construction has The default access implied by no access modifier.

8) what is get() and set() method ? with example.

The get method returns The value of The variable Name

The set method takes a parameter and assigns it to The name variable.

The get method return The variable value and The set method sets the value.

Example

```
public class person {
    private string Name;
    // get () method
    public string getName ();
    {
        return name;
    }
    // set () method
    public void setName (string new
                         Name)
    {
        This . Name = NewName;
    }
}
public class myclass {
    public static void main (string []
                             args)
    {
        person obj = new person ();
```

```
obj.setName("Shivali");
System.out.println(obj.getName());
```

* output *

Shivali

9) what is an aggregation ?

Aggregation helps in reusing the code.

when an object a contains a reference to another object B or we can say object A has a HAS-A relationship with object B. Then it is termed as aggregation

Example :-

```
public class vehicle { }

public class speed { }

public class van extends vehicle {
    private speed sp;
}
```

=> This shows that class van HAS-A speed.

10) what is composition ?

The composition design technique in while your class.

The composition is reuse code in multiple class and allows code reuse event from finer class.

Example :-

```
public class student {}

    public class student {
        private student student;

        public college () {

        This student = new student ();
    }
}
```

11) what is cohension ?

In object oriented design, cohension refers to about how a single class is designed. cohesion is The object oriented principle most closely associated