 

**Batch No.\_\_\_\_\_ Roll No. \_\_\_\_**

**Experiment / Assignment/ Tutorial No. 4**

**Grade : AA/AB/BB/BC/CC/CD/DD**

**Signature of the Staff In-charge with date**

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| **TITLE :  An Array of Objects** |

**AIM:** Write a program which accepts information about n no of customers from user .Create an array of objects to store account\_id ,name,balance.

Your program should provide following functionalities

1. To add account
2. To delete any account detail
3. To display account details.

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**Expected OUTCOME of Experiment:**

**CO1:** Understand the features of object oriented programming compared with procedural approach with C++ and Java

CO2: Explore arrays, vectors, classes and objects in C++ and Java

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**Books/ Journals/ Websites referred:**

1. E. Balagurusamy , “Programming with Java” McGraw-Hill.
2. Sachin Malhotra, Saurabh Choudhary, “Programming in Java”, Oxford Publications.

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**Pre Lab/ Prior Concepts:**

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**Arrays of Objects:**

Unlike traditional array which store values like string, integer, boolean, etc. array of objects stores objects. The array elements store the location of reference variables of the object.

**For example:**

class Student {  
   int rno;

   String name;

   float avg;  
}

Student(int r, String name, float average)

{

     rno=r;

    this.name=name;

     avg=average;

}

Student studentArray[] = new Student[n];

* The above statement creates the array which can hold references to n number of  Student objects. It doesn't create the Student objects themselves. They have to be created separately using the constructor of the Student class. The studentArray contains n number of memory spaces in which the address of n  Student objects may be stored.

for ( int i=0; i<studentArray.length; i++) {  
studentArray[i]=new Student(r,name,average);  
}

* The above for loop creates n Student objects and assigns their reference to the array elements. Now, a statement like the following would be valid.

studentArray[i].r=1001;

.

**Class Diagram:**

**Algorithm:**

**Implementation details:**

**Output:**

**Conclusion:**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_                    Signature of faculty in-charge**

**Post Lab Descriptive Questions**

**Q.1**  If an array of objects is of size 10 and a data value have to be retrieved from 5th  object then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ syntax should be used.

a)Array\_Name[4].data\_variable\_name;  
b)Data\_Type  Array\_Name[4].data\_variable\_name;  
c)Array\_Name[4].data\_variable\_name.value;  
d) Array\_Name[4].data\_variable\_name(value);

**Ans:**

 Q.2)The Object array is created in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
a)Heap memory  
b) Stack memory  
c) HDD  
d) ROM