Name:

```
Assignment-4
                  Charbage Collection.
Q1) public class Main !
       static class Unreachable Object ?
            String name;
            public Unreachable Object (String name) {
              this name = name;
                                         ill side of a
            public void display() {
                Unreachable Object obj = new Unreach able Object ("Object");
                obs.showeri
            public void show () { into ment hor site!
               Unreachable Object obj= new Unreachable Object ("Object");
               System. out. println ("Name: "+obi. mame);
           protected void finalize () throws Throwable {
              System.out.println ("Object "+name +" is being garbage collected);
              super. finalize (),
                            er och idea occin Aleque
                            continuos made massel marini
      public static void main (String 1) arqu) (
         Unreachable Object obj = new Unreachable Object ("Main Object");
         obi. display();
         system.gccs;
            hast sales appared that and bround have your
  Output
  Name: Somer Object
```

Regd. Number:-

```
class Rearigning Rehenence &
(JB
        String names
        public Reausigning Reference (String name) {
           this name = name;
        protected void finalize () throws Throwable {
             System. out. println C'Object named "+name +" has been garbage
                               collected!">
             sciper. finalize ();
    public class Main f
          public static void main (String [] curgs) {
            Reassigning Reherence obi1 = new Recurigning Reherence ('Object 1');
            Reassigning Reherence Obi 2 = new Reassigning Reherence (Object 2');
            Obi 1 = obia; I want to the transfer
            System. gccli man in my stain, sousses
            myt
              Thread sleep (1000); Il Pause for liek
            I coatch (Interrupted Exception e) {
               System.out.printh(e);
   Output :
   Object named Object 1' hou been garbage collected.
```

```
public class NullifiedReherence [
       String name;
        Public Nullistied Roberence Ostring name) {
            this name = name;
       public static void main (String [] args) {
           NullifiedRoherence = 1 = new NullifiedRoherence ("My Object");
                              ( der en i det
           reference = null;
                                      HIV WIN HOUSE, who
           system, gc();
        protected void finalize (){
           System.out-printh ("Object" "+ name+" how been successfully
                               garbage collected.");
                                     1 ( House of tologal ) 1
class Anonymous Oblect ?
    String name:
                  MH KITTHINGS
    public Anonymous Object (String name) [
        this name = name;
    public void display()[
        System. out-printin ("Name: "+ noune);
     protected void finalize () throws Throwable ?
       SOP ("Object "+names" has been garbage collected!);
        super finalize ();
public class Main [
    public static void main (String[] args) !
       new Anongmour Object ("John"). display();
       System. gc();
```

```
QD) public class MyDalas
         Private int int Value 1;
        private double value 2;
        Public MyData (int value), not value) {
              this. value 1 = value 1;
              this value 22 value 2;
        Public void set Value 1 (int value 1) {
              this. value 1 = value 1;
         public void set Valued (double valued) {
              this. valued: valued;
         public int getValue1() [
             neturn value1;
         public dotable getValue2(){
             neturn valuez;
         public to static vold main (String [] args) {
            MyData obil= new MyData (10, 3.14);
            MyData obsid = new MyData (20, 628);
            obil=null;
            obsa=null;
            Rantime nt = new Runtime get Reentime ();
            long botal Memory = rt. total Memory ();
            System.out.println O'Potal memory allocalted: "+ total Memory +
                                "bytes");
            nt.gcc);
            long free Memory = nt. free Memory ();
            long memory Oceanied = total Memory - free Memory to:
            System.out. println OMemory occupied by objects: "+ memory Occupied.
                              "byter");
```

```
Output:-
 Total memory allocated: 113573888 bytes
 Memory occupied by objects: 599704 bytes
import vava, wil. *;
public class Memory Intensive Program &
    public static void moun (String [] args) {
      List (Object) Objectlist = new Arraylist <> 03
      long stout times System, or
      for Cint 120; ix 1:000-000; itt) {
     objectlist add Cnew Object ());
     System.out.println ("Timestamp: "+ System. current Time Millis());
      System. out. println ("Heap Size (MB): "+(Runtime.get Runtime ().
                        total Memory () / (1024 * 1024)));
      System. out. println ("Free Space (MB): "+(Rantime, getRuntime ().
                  mee Memory () / (1024 * 1024)));
                                        internation tracker
                                  7 Ocollety, populs silving
Output :-
Timestamp: 1712 431629507
Heap Size (MB): 121
free Space (MB): 90
                     Washing with the Lov silver
                     SEXUAL FOOTE SECTION FOR THEIR MAINT
                                 extract a meaning and
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Regd. Number:

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97
   import java . util. t ;
                                 my Various in almostic pro
    class Students
         String name;
         String address;
         String gender:
         String dobi
         public Student (String name, String address, String gerder, String dob)
             this name = name;
             this address = address;
             this.gender-2 gender;
             this.dob= dob;
         public String getName() {
           return name;
         public String getAddrew() {
           return address;
         public String get Gender () {
            return gender;
         public String get d Dob () {
            neturn dob;
         public void setName (String name) {
             this name 2 name;
         public void set Address (String address) [
             this. address = address;
         public void set Grander (String gender) {
             this. gender 2 gender;
```

```
Public vold sel Dob (String dob) {
          this . dob = dobi
      protected void finalize () {
          System. out. println O'Memory for student" + nearne + "succentuly
                                neclaimed. 1);
                           11 - 100 1 1 1 12 1 1 1 10 17
Public class Main f
      public static void moun (String [] args) [
          Scanner sc = new Scanner (System.in) &;
         List (Student) studentlist = new Arraylist (>();
         while (true){
            SOP ("In1. Add student In 2. Search by Hame In 3. Exit");
            int choice = sc. next1nt();
            sc. nextline ();
            switch (choice)[
              case 1: major port second
                 sop ("Enher student name: ");
                 String name = sc. nextline();
                 SOP ("Enter address: ");
                  String markers sc. next Line ()
                  Sop (l'Enter gender: 1);
                  String gender = sc. trextline ();
                  sop ("Enter date of birth (dd/mm/yyyy):
                  String dob = sc. nextline ();
                  Student s = new Student Chame, addrew, gender, dob);
                  studentlist add (s) ada ;
                  break;
             care 2:
                 sop ("Enter student name to search:")
                 String search = sc. nextline ();
```

Name:-

J

```
Pur (Student st: studentlist) {
          if (st. geiNamel). equals Ignore (aue (30000th 5 Name)){
             SOP ("Student found:");
             Sor ("Name: "+ st. gername ());
             SOP ("Addrew: "+ st.getAddrew());
             SOP ("Grander: "It st. getGrander ());
             SON ("DOB: "+ st. getDob());
             breaki
       break;
    case 3:
         SOP C'Exiting Program");
         so dosetti
         neturni
     default:
          SOP ("Invalid choice. Please my again.");
1. Add Student
2. Search by Name
3. Exit
Enter Student Name: slum
Enter address: nagapali
Enher gender: male
Enter date of birth (dalmm/gygy): 02-06-2009
```