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| **Experiment No.** | 4A |

| **AIM:** | Write a program to demonstrate arrays of objects. |
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| **Program 1** | |
| **PROBLEM STATEMENT :** | Write a program in Java to maintain the information of Movies which includes the information of name of movie , type of movie( action , thriller , comedy ,drama ) , Hero name , Heroine , budget in Rs. Write a program to accept the information of movies from user and sort them according to the budget of the film. |
| **PROGRAM:** | import java.util.\*;  class movies{  String name, genre, hero, heroine; double budget;  movies(String name, String genre, String hero, String heroine, double budget){  this.name = name; this.genre = genre; this.hero = hero; this.heroine = heroine; this.budget = budget;  }  void sort(movies arr[]){  int k=0;  for (int i = 0; i < arr.length - 1; i++){  for (int j = 0; j < arr.length - i - 1; j++){  if(arr[j].name.equalsIgnoreCase(arr[j + 1].name)){  k++;  }  if (arr[j].budget > arr[j + 1].budget){  movies temp = arr[j];  arr[j] = arr[j + 1];  arr[j + 1] = temp;  }  }  }  System.out.println(k + " case(s) with identical movie title(s) has/have been encountered!!");  }  }  class movie1{  public static void main(String []args){  Scanner sc = new Scanner(System.in);  System.out.print("Enter number of movies : ");  int n = sc.nextInt();  if(n>0){  movies arr[] = new movies[n];  for(int i=0; i<n; i++){  sc.nextLine();  System.out.println("Enter details of movie " + (i+1) + " -");  System.out.print("Title of movie : ");  String name = sc.nextLine();  System.out.print("Genre : ");  String genre = sc.nextLine();  System.out.print("Name of hero : ");  String hero = sc.nextLine();  System.out.print("Name of heroine : ");  String heroine = sc.nextLine();  System.out.print("Budget(in crores) : ");  double budget = sc.nextInt();  if(budget<=0){  System.out.println("Invalid input!!");  break;  }  arr[i] = new movies(name,genre,hero,heroine,budget);  }  arr[0].sort(arr);  for(int j=0; j<n; j++){  if(j==0){  System.out.printf("\nSorted List -\n%-30s %-15s %-20s %-20s %-15s\n", "Title", "Genre", "Hero", "Heroine", "Budget(in crores)");  }  System.out.printf("%-30s %-15s %-20s %-20s %-15s\n", arr[j].name, arr[j].genre, arr[j].hero, arr[j].heroine, arr[j].budget);  }  }  else{  System.out.println("Invalid input!!");  }  }  } |
| **RESULT:** | |
| **Program 2** | |
| **PROBLEM STATEMENT :** | Your swim school has two swimming instructors, Jeff and Anna. Their current schedules are shown below. An “X” denotes a one-hour time slot that is occupied with a lesson. Write a program with array(s) capable of storing the schedules. Create a main menu that allows the user to mark a time slot as busy or free for either instructor. Also, add an option to output the schedules to the screen. Next, add an option to output all time slots available for individual lessons (slots when at least one instructor is free). Finally, add an option to output all time slots available for group lessons (when both instructors are free). |
| **PROGRAM:** | import java.util.\*;  class user{  void display(int arr[][]) {  System.out.printf("%-10s %-10s %-10s %-10s %-10s\n","Time Slot", "Monday", "Tuesday", "Wednesday", "Thursday");  String timeslots[] = {"11-12", "12-1", "1-2", "2-3"};  for (int i = 0; i < timeslots.length; i++) {  System.out.printf("%-10s %-10s %-10s %-10s %-10s\n", timeslots[i], arr[0][i], arr[1][i], arr[2][i], arr[3][i]);  }  }  }  public class swimschool {  public static void main (String []args){    Scanner sc = new Scanner(System.in);  int x = 0;  int arrjeff[][] = {{1,1,0,0},{0,1,1,1},{0,1,1,0},{1,1,1,0}};  int arranna[][] = {{1,1,0,1},{0,1,0,1},{1,1,0,0},{1,0,1,1}};  user a = new user();  do{  System.out.print("1. Display schedules\n2. Mark a time slot as free/busy for Jeff\n3. Mark a time slot as free/busy for Anna\n4. Display available time slots for individual lessons\n5. Display available time slots for group lessons\n6. Exit\nEnter your choice : ");  x = sc.nextInt();  switch(x){  case 1: System.out.println("Jeff's Schedule -");  a.display(arrjeff);  System.out.println("Anna's Schedule -");  a.display(arranna);  break;    case 2: System.out.println("Choose instructor whose schedule is to be edited\n1. Jeff\n2. Anna\nEnter your choice : ");  int y = sc.nextInt();  System.out.println("Choose time slot\n1. 11-2\n2. 12-1\n3. 1-2\n4. 2-3\nEnter your choice : ");  break;  case 3:  break;  case 4:  break;  case 5:  break;  case 6: break;  default: System.out.println("Invalid input!!");  }  }  while(x!=6);  }  } |
| **RESULT:** | |
| **CONCLUSION:** | Studied the implementation of array of objects to solve the given problems. |