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ST BENEDICT'S COLLEGE

SUBJECT	**Information Technology**	**DATE**	November 2015
GRADE	**11**	**MARKS**	120
EXAMINER	Mrs Nocton Smith, Mrs Kench and Mr Gill	**MODERATOR**	Mrs Gill
NAME		**DURATION**	3 hours
CLASS			

COGNITIVE LEVELS

LOW ORDER	36 %	**MIDDLE ORDER**	42 %	**HIGH ORDER**	23 %

STUDENT'S RESULT COMMENT	
TEACHER'S SIGNATURE	
PARENT'S SIGNATURE	

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SECTION A: SQL 40 MARKS

QUESTION 1 40 MARKS

1.1 Provide a list of all continents and countries, sorted alphabetically by country within continent. (3)

```
SELECT Continent, Country √
FROM tblCountries √
ORDER BY Continent, Country; √
```

1.2 Canada has removed their support of the program. Delete the record for Canada from tblCountries. (3)

```
DELETE * √
FROM tblCountries √
WHERE Country = "Canada"; √
```

1.3 Insert the country Norway in the continent of Europe into tblCountries. (3)

```
INSERT INTO tblCountries ( Country, Continent) √
VALUES ("Norway", "Europe");√
```

1.4 Increase the number of acceptances for all occurrences of Germany and France by 500 using the country names. (5)

```
UPDATE tblStatistics √
SET Acceptances = Acceptances + 500√
WHERE Country = 'FRANCE'√ OR√ Country = 'Germany'; √
```

1.5 Generate a 5 character code for each country in Europe. Use the first two letters of the country and the last three letters of the country. (5)

```
select concat√ (left(country, 2), √right(country,3)) √ as code
from tblcountries√
where Continent = 'Europe'√
```

1.6 Display the total number of acceptances for each country. Display both the country name and the total amount. (5)

```
SELECT country, √ sum(Acceptances) √√
FROM tblStatistics√
GROUP BY countryID; √
```

1.7 List all the records that have data for the month of august and have more than 100 000 applications in the table tblStatistics. (5)

```
SELECT *
FROM tblStatistics√
WHERE month(date) √ = 8√ AND √applications > 100000; √
```

1.8 List the countries that have the 5 top most rejections.

Note rejections = applications – acceptances. (5)

```
SELECT country, applications–acceptances as rejections√
FROM tblStatistics√
ORDER BY rejections√ DESC √
LIMIT 5√
```

1.9 Determine the average number of acceptances for each country. Display only the countries an average of more than 10 000. (6)

```
SELECT  country, avg(acceptances) √ as aveAcc
FROM tblStatistics√
```

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GROUP BY country√√
HAVING aveAcc > 10000; √√

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QUESTION 2 24 MARKS

```
public class Partners {
//2.1 [3]
    private√ String√ org;√
    private String category;
    private String website;
    private String location;
    private int√ total = 0; √ //3.7.1

//2.2 [3]
    public Partners(String o, String c, String w, String l) √ {
        org = o;
        category = c;
        website = w;
        location = l; √√ for assignment
    }

//2.3 [3]
    public String getOrg() {
        return org; √
    }

    public String getCategory() {
        return category; √
    }

    public String getWebsite() {
        return website; √
    }
//2.4 [12]
    public void correctWebsite()√ {
        String newWeb = website.substring(7); √
        String[] parts = website.split("\\.");√√
        String www = "www";√
        String newOrg = "org";√
        if (!parts[1].equalsIgnoreCase(org)) {√
            org = parts[1].toUpperCase();√√
        }
        website = www + "."√ + parts[1] + "."√ + newOrg; √
    }

//2.5 [5]
    public String toString() {√

        return√ "Organisation : " + org + "\n" + "Category : " + category + "\n"
```

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```
            + "Website : " + website + "\n" + "Location : " + location; √√√ for correct layout
    }
//3.7.2 [1]
    public int getTotal() {
        return total; √
    }
/3.7.3 [2]
    public void updateTotal(int a) √
    {
        total += a; √
    }

}
```

QUESTION 3 **38 MARKS**

```
public class PartnersArray
{
//3.1 [4]
   private √Partners [] partArr√ = new Partners [ 100 ]; √
   private int size = 0; √

//3.2 [10]
   public PartnersArray()√throws FileNotFoundException
   {
      Scanner sc = new Scanner ( new File ("partners.txt")); √
      while (sc.hasNext())√
      {
         String line = sc.nextLine();  √
         Scanner sc2 = new Scanner (line).useDelimiter("#");√
         String org = sc2.next();√√
         String div = sc2.next();
         String web = sc2.next();
         String loc = sc2.next();
         partArr[size] √= new Partners(org, div, web, loc); √
         size++;√

      }
   }
   //3.3 [5]
   public String toString()√
   {
      String output="";

      for (int i = 0 ; i < size; i ++)√
      {
         output = output + √partArr[i] + "\n\n";√
      }
      return output; √
   }
   //3.4 [8]
   public void sort()
```

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```
{
    for ( int i = 0 ; i < size-1 ; i ++)√√
    {
      int pos = i;
      for (int j = i + 1 ; j < size ; j ++)√√
      {
          if (partArr[pos].getOrg().compareToIgnoreCase(partArr[j].getOrg()) > 0) √√
          {
              pos = j;

          }
      }
      Partners temp = partArr[i]; √√
      partArr[i] = partArr[pos];
      partArr[pos] = temp;}

}
//3.5 [6]
public String search(String org) √
{
  //print name , website for all organisations of a given type....

  String output = "";

  for (int i = 0 ; i < size ; i ++)√
  {
     if (partArr[i].getCategory().equals(org)) √
     {
       output = output + partArr[i].getOrg() + "\t" + √
              partArr[i].getWebsite() + "\n";√
     }

  }
  return output; √
}
//3.6 [5]
  public void correctWebsites()√
{
   for (int i = 0 ; i < size; i ++)√√
   {
     partArr[i].correctWebsite();√√
   }
}
//3.7.4 [12]
   public String √calcDonations() {
      String temp = "";
      try {
         Scanner sc = new Scanner(new File("donations.txt"));√
         while (sc.hasNext()) {√
            String line = sc.nextLine();
            System.out.println(line);
            Scanner sc2 = new Scanner(line).useDelimiter(" ");√
```

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```
            String org = sc2.next();
            int amount = sc2.nextInt();√
            int i = 0;
            boolean found = false;
            while (i < size && found == false) {√
                if (org.equalsIgnoreCase(partArr[i].getOrg())) {√
                    partArr[i].updateTotal(amount); √
                    found = true; √
                }
                i++;
            }

            temp = "";
            for (i = 0; i < size; i++) {√
                if (partArr[i].getTotal() != 0) {√
                    temp += partArr[i].getOrg() + " " + partArr[i].getTotal() + "\n";√
                }
            }
        }
    } catch (FileNotFoundException ex) {
        Logger.getLogger(PartnersArray.class.getName()).log(Level.SEVERE, null, ex);
    }
    return temp;
  }
}
}
```

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