LINQ –Day2 Assignments

Using Console Application:

1- Declare a List of numbers as shown :

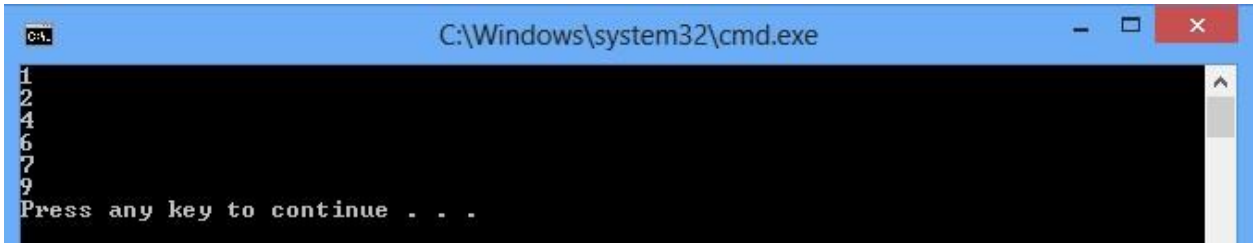
```
List<int> numbers = new List<int>() { 2,4,6,7,1,4,2,9,1};
```

Then write the following queries

[

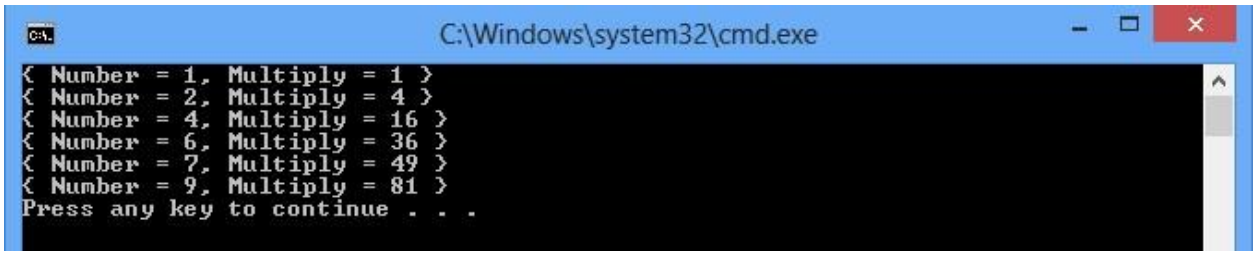
Query1: Display numbers without any repeated Data and sorted

o/p should be as follow:



Query2: using **Query1** result and show each number and it's multiplication

o/p should be as follow:



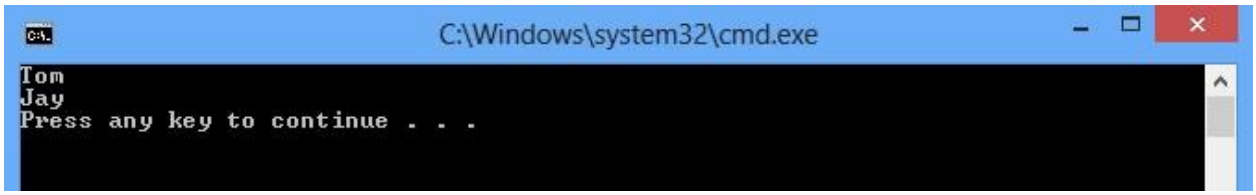
2- declare an array of names as shown :

```
string[] names = { "Tom", "Dick", "Harry", "MARY", "Jay" };
```

Then write the following queries:
[USING Query Expression and method Expression]:

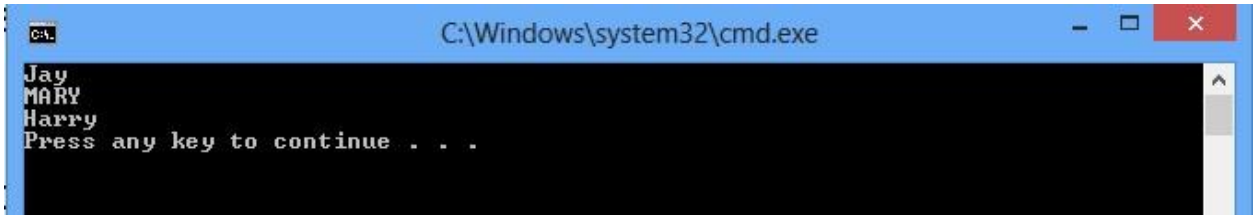
Query1: Select names with length equal 3.

o/p should be as follow:



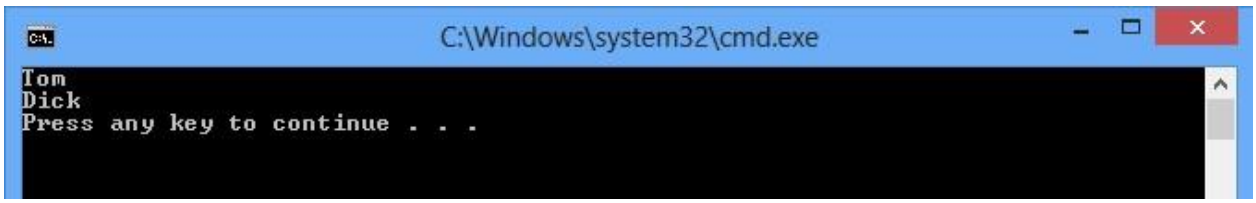
Query2: Select names that contains "a" letter (Capital or Small)then sort them by length
(Use toLower method and Contains method)

o/p should be as follow:



Query3: Display the first 2 names

o/p should be as follow:

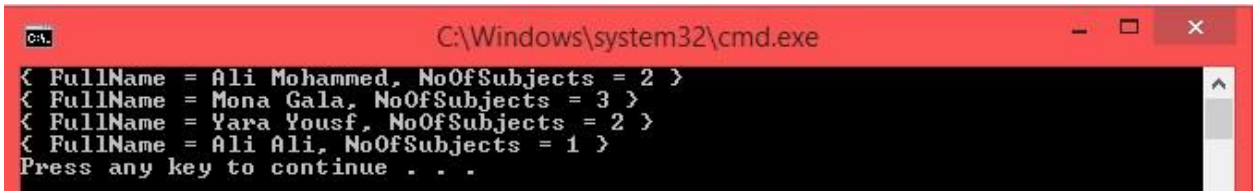


3- Declare a class Subject that contains the following properties (Code, Name) and declare Student class that contains the following properties (ID, FirstName, LastName , Subject []), then define List of students As follow

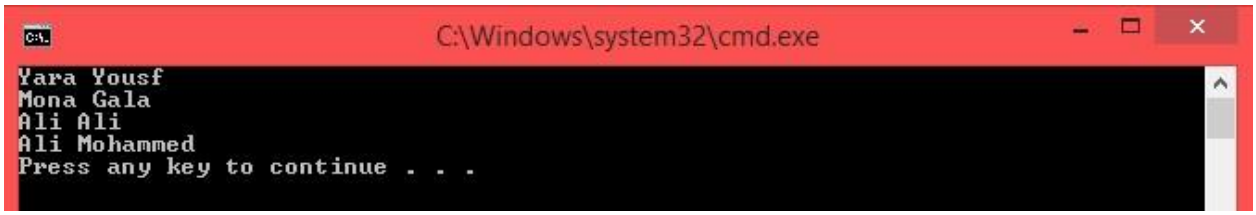
```
List<Student> students=new List<Student> (){
            new Student(){ ID=1, FirstName="Ali", LastName="Mohammed",
subjects=new Subjcet[]{ new Subjcet(){ Code=22,Name="EF"}, new Subjcet(){
Code=33,Name="UML"}}},
            new Student(){ ID=2, FirstName="Mona", LastName="Gala",
subjects=new Subject []{ new Subject(){ Code=22,Name="EF"}, new Subject (){
Code=34,Name="XML"},new Subject (){ Code=25, Name="JS"}}},              new
Student(){ ID=3, FirstName="Yara", LastName="Yousf", subjects=new Subject
[]{ new Subject (){ Code=22,Name="EF"}, new Subject (){
Code=25,Name="JS"}}},
             new Student(){ ID=1, FirstName="Ali", LastName="Ali",
subjects=new Subject []{  new Subject (){ Code=33,Name="UML"}}},

            };
```

Then write the following queries
[USING Method Chaining] for each query

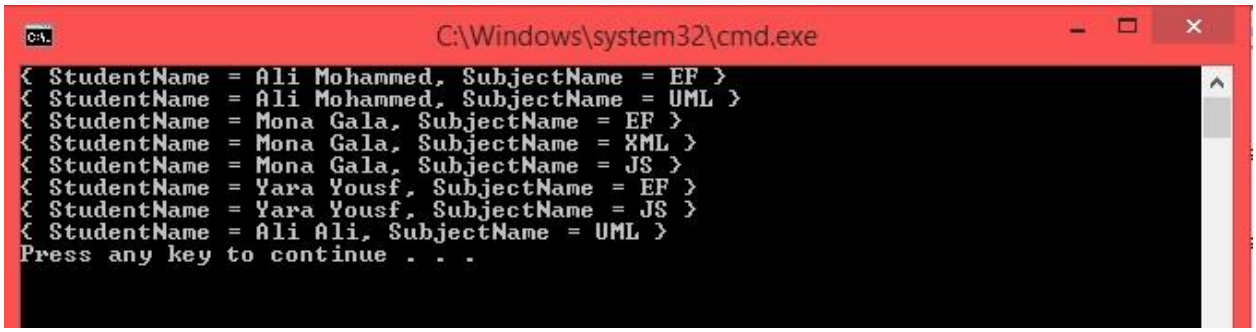
Query1: Display Full name and number of subjects for each student as follow



Query2: Write a query which orders the elements in the list by FirstName **Descending** then by LastName **Ascending** and result of query displays only first names and last names for the elements in list as follow



Query3:
Display each student and student's subject as follow (use selectMany)



Query4: Then as follow (use GroupBy)