

## Assignment No 2

### Important Note:

- For all the questions, you must use Visual Studio and upload all files of the solution.
- Create separate solutions files for each question (i.e. one project per solution)
- Every Question should be named as “k<Year><StudentID>\_Q<QuestionNumber> for instance: k180123\_Q1
- Your Assignment should have proper Objected Oriented Programming and Data Structures
- Last Date for Submission: **December 14, 2021 (11:59 PM)**
- There will be no extensions.
- All URLs, File Paths will be included in the app.config or web.config. No Hardcoding
- Your submission will be marked as 0 if:
  - Submitted late.
  - The submitted assignment does not open or the file is corrupted.
  - Assignments submitted via any medium except for Google Classroom.
  - Copied amongst students or from another source

### **Question No 1: SMTP Windows Service**

You have multiple applications that need to send emails to recipients. You are required to create a centralized application which can send emails using SMTP. Create a windows service which reads a JSON file (1 json per file) after every 15 minutes from a fixed location (provided in the app.config) and sends email to the receipts. Following is the JSON input sample:

```
{
  "To": "",
  "Subject": "",
  "MessageBody": ""
}
```

### **Question No 2: RSS Feed Windows Service**

RSS feeds enable publishers to syndicate data automatically. A standard XML file format ensures compatibility with many different machines/programs. RSS feeds also benefit users who want to receive timely updates from favorite websites or to aggregate data from many sites. You are required to create a Windows Service which reads RSS feeds every 5 minutes from any two of the Pakistani News Web Site. The output should be stored in one xml file sorted in descending order of date/time. At every interval, It will overwrite the contents of the file. The output format should be similar to what is shown below:

```
<NewsItem>
  <Title></Title>
  <Description></Description>
  <PublishedDate></PublishedDate>
  <NewsChannel></NewsChannel>
</NewsItem>
```

## Information Processing Techniques

### **Question No 3: Folder Monitor Windows Service**

Folder Monitor client is supposed to track changes on a specific folder. You are required to create the following windows services:

- Your service is supposed to check the specified folder initially every minute for any changes. If there are any changes, it should copy the new or updated files to another fixed location. If there are no changes then it should increase the delay by additional 2 minutes until it reaches 1-hour delay. The delay should not exceed 1-hour gap.

Note: You cannot use the File Watcher class.