<table>
<thead>
<tr>
<th>Month</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>Data processing and Information processing concepts</td>
</tr>
</tbody>
</table>
| September  | System software  
              Introduction to Web page with HTML          |
| October    | Application software  
              HTML                                              |
| November   | Revision                                         |
| December   | Mid-Year Examination - 2016                       |
| January    | Binary Computing                                 |
| February   | Programming Languages                             |
| March      | Algorithms and Flowchart                          |
| April      | Revision  
              Final Project                                  |
| May        | Final Examination – 2017                          |
Chapter 1: Data Processing & Information Processing

Contents

- The data processing cycle
  - Data collection and input stage
  - Various methods of collecting data and significance of each.
  - Comparison between manual data collection and automatic data capture.
  - The use and importance of a source document

- The processing stage
  Different ways of processing
  E.g.: sorting, grouping, formatting, calculations
  - The output stage
  - The storage

Organizing, Manipulation, Distribution of information

Difference between data encoding and decoding
Difference between data encryption and decryption.
Applications of encoded and encrypted data

Compare and contrast between manual and computerized data processing systems.

Manual handling of accounts in supermarket places vs. computerized handling in big departmental stores.

Characteristics of a computerized system
Its advantage and limitations

Search Task One:

How many types of automated systems are working in our school? Make a list of all.
Write a complete search report (hard copy print) of your findings.

Practice questions:

- Describe the data processing cycle with the help of a diagram
- Search two more application areas that uses
  - Manual ways of data collection
  - Automated data capture

Compare and contrast between
- source document and turnaround document
- manual and computerized system
- data collection and data capture

Activity:

Students will be asked to compare the two methods of data capture and describe scenarios in which each will be feasible (LFL Activity).

Lab Task

Design a power point presentation to show the difference between manual and computerized system.

Web Link:
### Chapter 3: Software & Types (system software) – An introduction to HTML

#### Contents

**Software and its types:**
- Comparison between system software and application software

**System software**
- Basic input/output system instructions: The role of ROM BIOS in a system
- The categories of system software: Translation programs, Utility Programs, OS
- Components & functions of an operating system
- Types of Operating system
  - Operating system supporting command line interface
  - Operating system supporting Graphical interface

**Introduction to Open source software**

**Lab session 1**
- An introduction to HTML and its tags
- What is an HTML editor and how to use it?
- The structure of an HTML program.
- How to write and save the HTML program.

**Search Task Two:**
- Search on the different types of operating system environments.
- Find out how the current versions of operating systems have upgrade.
- Prepare a complete search report (hard copy print) on your findings.

**Practice questions:**
- List various responsibilities of an Operating System.
- How Operating System help Multitasking?
- Make a list of different utility software available
- Why are device drivers required by the system?
- What is stored in ROM BIOS?

**Lab Task**
- Saving text file as a webpage after inserting necessary html tags.

**Web Link:**
- [http://successnotes4u.blogspot.com/2012/02/what-are-different-types-of-system.html](http://successnotes4u.blogspot.com/2012/02/what-are-different-types-of-system.html)
Discuss the following categories of application software:

- Educational software
- Productivity software
- WP and spreadsheet software
- Presentation software
- Graphics and DTP software
- Entertainment software
- Database management software

Difference between general purpose and special purpose software.

Other terms for general purpose software; Off the shelf generic software VS special purpose Bespoke software

Advantages and disadvantages of Bespoke and off the shelf software

Lab session 2

Creating a simple Web Page
Using Document Head and Body tags
Following tags will be used.

Alignment, formatting, bgcolor, Line breaks <br>, marquee, horizontal ruler.

Activity

Search some special purpose software being used in school and at the market places.

Practice questions:

What is the need for designing special purpose software besides using application programs?

State four possible advantages of using a generic application program rather than purchasing bespoke software.

Web Links:
http://www.buzzle.com/articles/different-types-of-application-software.html

Practical Worksheet#1

Lab Task

Type text in center and bold “Welcome to the Web page” in between two horizontal rulers.
Type a paragraph and apply <br> tag, a scrolling text, and include line breaks between the text.
**November**

**Chapter 3: Software & Types (application software)**  
- Formatting tags in HTML

<table>
<thead>
<tr>
<th>Contents</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision of Theory chapters</td>
<td>Completion of revision worksheets</td>
</tr>
</tbody>
</table>

**Lab session 3**  
Creating a simple Web Page  
Using Document Head and Body tags  
Following tags will be used.

Inserting headings & using  
Six different levels of headings with attributes.

The attributes of a `<Body>` tag.  
Applying background and text in document Body.

<table>
<thead>
<tr>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Worksheet#2</td>
</tr>
</tbody>
</table>

**Lab Task**  
Type a paragraph and apply each heading tag from `<h1>` to `<h6>` with their attributes to observe the difference

---

**December**

**Midyear Examination 2016**

**January**

**Chapter 2: Binary computing**  
- Table in HTML with attributes

<table>
<thead>
<tr>
<th>Contents</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce number system as a set of rules for representing data using numbers.</td>
<td>Exercise quizzes on conversions and worksheets</td>
</tr>
<tr>
<td>Perform the conversion of denary numbers to binary and vice versa.</td>
<td>Assessment</td>
</tr>
<tr>
<td>Perform Binary addition and subtraction</td>
<td>• Worksheet</td>
</tr>
<tr>
<td>To understand data storage in terms of bits and bytes.</td>
<td>• Test</td>
</tr>
</tbody>
</table>
Lab session 4
Tags to create ordered/unordered lists:
Use of <ul> and <ol> tags and their attributes

Lab session 5
Inserting tables with attributes

Practical Worksheet#3
Lab Task
Insert two bullets and two numbered text, add six different heading styles, and change the color of text in the web page you have designed earlier.

Practical Worksheet#4
Lab Task
Students will design a Bio data layout by inserting five fields and few records.

February

Chapter 8: Introduction to Programming Languages
-Table in HTML with attributes

Contents
The evolution of programming languages from low level to high level
Understanding of:
- Low level language
- Assembly language
- High level languages and generations of high level languages
- The role of interpreters in any programming language

Activity
List all the high level programming languages according to their generations.

Assessment
- Concept review test

Web Links:
### March

#### Chapter 7: Algorithms and Flow Charts

- **Table in HTML with attributes**

<table>
<thead>
<tr>
<th>Contents</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn of creating step-by-step instructions in the form of an algorithm.</td>
<td>Create an algorithm and flowchart for the following problems.</td>
</tr>
<tr>
<td>Flow chart symbols and functions of different flowchart symbols.</td>
<td>Baking a cake</td>
</tr>
<tr>
<td></td>
<td>preparing for the monthly test</td>
</tr>
<tr>
<td></td>
<td>Adding two numbers</td>
</tr>
<tr>
<td>Creating flowcharts and benefits of creating flowcharts to solve a problem.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating algorithms and flowcharts to solve everyday life problems and simple mathematical problems.</td>
<td></td>
</tr>
</tbody>
</table>

#### Lab session 7

Inserting internal links as Bookmarks, with the help of following tags;
- `<a href="">`
- `</a>`

### Activity

Create an algorithm and flowchart for the following problems.
- Baking a cake
- preparing for the monthly test
- Adding two numbers

#### Web Link:

- [http://www.slideshare.net/devaashish1/algorithms-and-flowcharts](http://www.slideshare.net/devaashish1/algorithms-and-flowcharts)
- [http://www.bbc.co.uk/education/guides/z3bq7ty/revision/3](http://www.bbc.co.uk/education/guides/z3bq7ty/revision/3)
- [http://www.bbc.co.uk/education/guides/z22wwmn/revision/5](http://www.bbc.co.uk/education/guides/z22wwmn/revision/5)

#### Search Task:
Observe the steps taken to create and save an html page.
Create a flow chart to identify the steps and conditions involved in creating and saving a web file.

#### Assessment
- Test

#### Final project ‘2017

Students will design their final project on the given topic and will use all the tags they have practiced.

### April

Revision/Quizzes/Revision Worksheet

### May

Annual Examination 2016-2017