# S J (GOVT) POLYTECHNIC - 102

BANGALORE-560001

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## LAB MANUAL
## NEW SCHEME (2020)

## COURSE TITLE: IT SKILLS
## COURSE CODE: 20CS01P

## BHASKAR M
## Lecturer Dept of CSE

# LOG SHEET

**STUDENT NAME:** _ _ _ _ _ _ _ _ _ _ _ _ _ _          **REGISTER NO:** _ _ _ _ _ _ _ _ _ _ _ _ _ _

**BRANCH:** _ _ _ _ _ _ _ _ _ _ _ _ _

| Sl. No | Task/Experiment/Program | Date |
|---|---|---|
| 1 | **Write an algorithm for programmable problems**<br><br>**• Add/subtract two numbers**<br>**• Find the largest/smallest of 3 numbers**<br>**• Calculate and print sum of 'N' numbers** | |
| 2 | **Design a flowchart for programmable problems**<br><br>**• Add/subtract two numbers**<br>**• Find the largest/smallest of 3 numbers**<br>**• Calculate and print sum of 'N' numbers** | |
| 3 | **Design and create simple game using MIT-scratch/Code.org** | |
| 4 | **Design and create simple android application (MIT App Inventor)** | |
| 5 | **Design and create webpage for displaying your poem (Title, header, paragraph, formatting tags)** | |
| 6 | **Design and create webpage for your wish list** | |
| 7 | **Design and create webpage using HTML and CSS about an awesome animal (Use necessary CSS tags)** | |
| 8 | **Design and create to demonstrate the concept of Hyperlinking of 2 or more web pages** | |
| 10 | **Design and create personal webpage with dashboard. [ Creating your own Blog]** | |
| 11 | **Design and create web page about advantages of Business process automation with respect to your branch of engineering.** | |
| 12 | **Create a workflow for education loan approval in bank/Diploma admission process(use any tool)** | |
| 13 | **Demonstrate ERP with ERPNext Demo for manufacturing, retail andservice sector (Use any other ERP tools).** | |
| 14 | **Create user account and demonstrate use of Google drive,Google docs,Google Co-Lab(use Jupyter notebook)** | |
| 15 | **15.1 Demonstrate Internet of Things using with examples**<br>**a. Smart home b. Smart city c. Smart farming** | |
| 16 | **Installation of Antivirus software** | |
| 17 | **Demonstration and hands on browser settings** | |
| 18 | **Demonstration and hands on privacy settings and password policy** | |
| 19 | **Demonstration of common security threats (using videos)**<br><br>**a. Phishing b. DoS attack c. Man in the middle attack**<br>**d. Spamming    e. virus** | |

**SIGN OF STUDENT:** _ _ _ _ _ _ _ _ _ _ _ _          **SIGN OF COURSE IN-CHARGE: :** _ _ _ _ _ _ _ _ _ _ _ _

# PRACTICAL SKILL EXERCISES

**1.** **Write an algorithm for programmable problems**

### Add/subtract two numbers

**Step 1:** Start

**Step 2:** Input A & B

**Step 3:** Add A& B

**Step 4:** C=A+B

**Step 5:** Print C

**Step 6:** Stop

### Find the largest/smallest of 3 numbers

**Step 1:** Start

**Step 2:** Input a, b, c

**Step 3:** Let max=a

**Step 4:** is b> max? then max=b

**Step 5:** is c> max? then max=c

**Step 6:** Print max

**Step 7:** Stop

### Calculate and print sum of 'N' numbers

**Step 1:** Start

**Step 2:** Input n values

**Step 3:** i=1, sum=0

**Step 4:** if(i>n) then go to Step 8

     end if

**Step 5:** sum=sum+i

**Step 6: i=i+1**

**Step 7:** Go to Step 4

**Step 8:** Print value of sum

**Step 9:** Stop

**2. Design a flowchart for programmable problems**

**Example for Reference:**

- **Add/subtract two numbers**

- **Find the largest/smallest of 3 numbers**
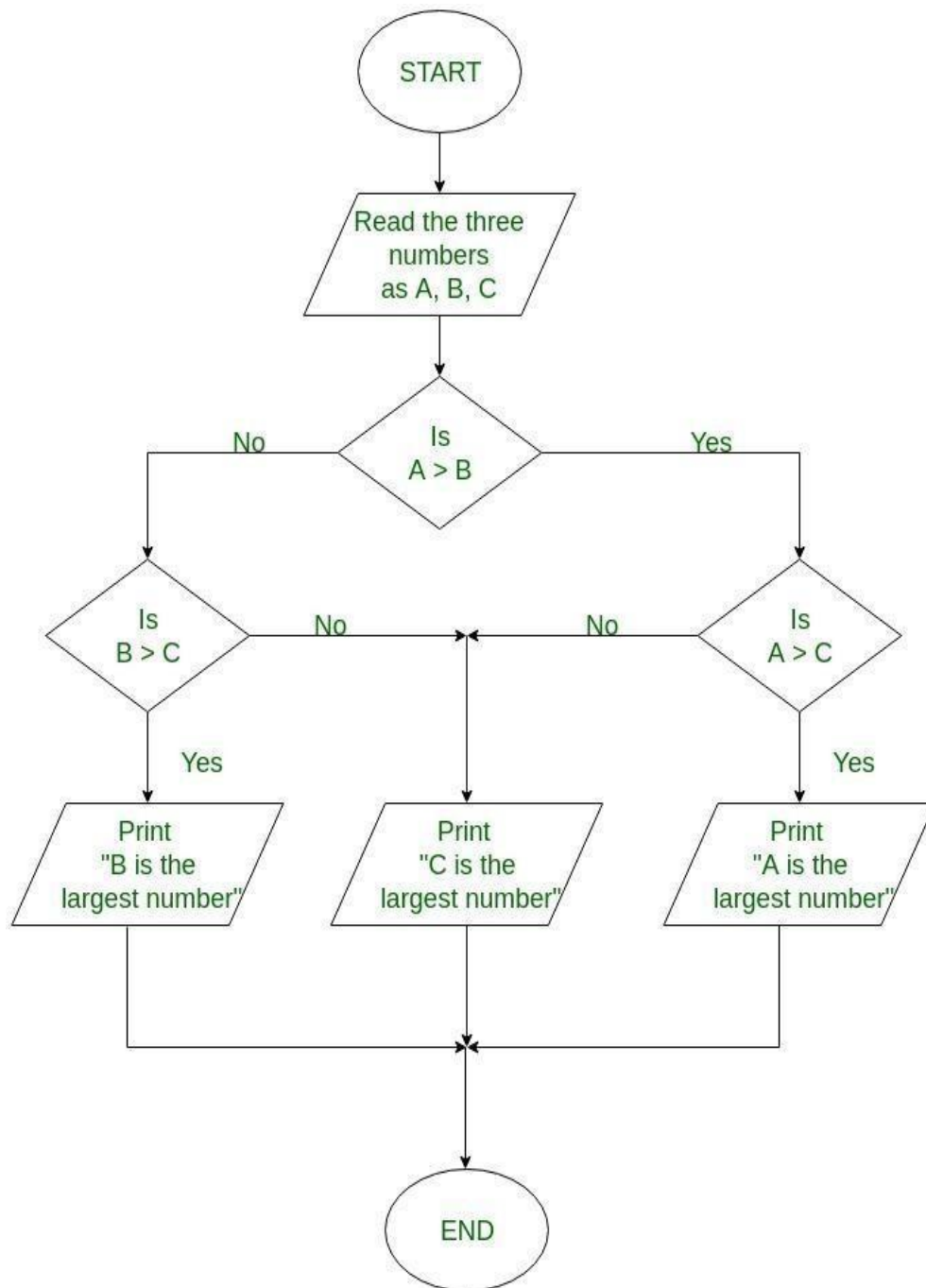
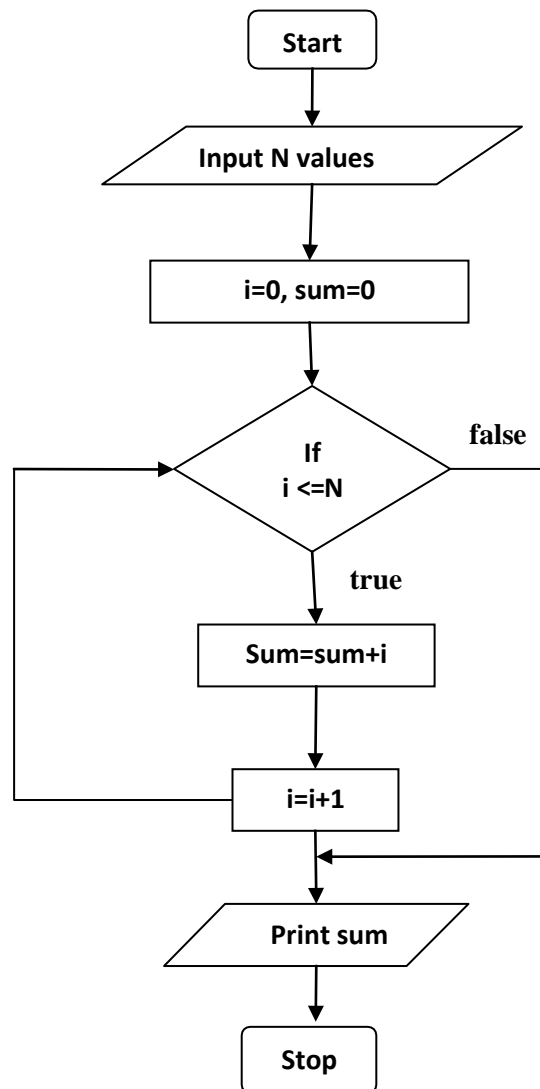- **Calculate and print sum of 'N' numbers**

- **Add two numbers**
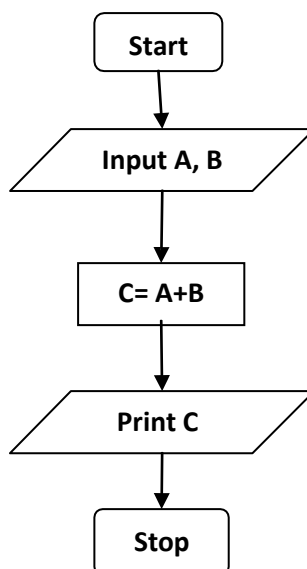


- **Subtract two numbers**
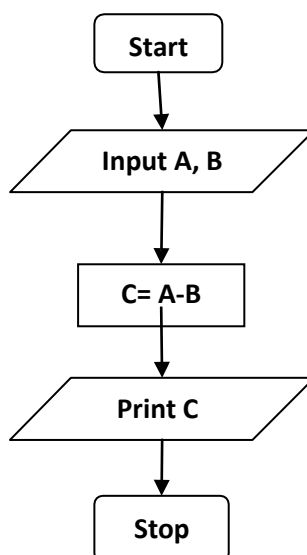
- **Find the largest of 3 numbers**

- **Calculate and print sum of 'N' number**

```
                          ┌──────────┐
                          │  Start   │
                          └──────────┘
                               │
                               ▼
                    ╱───────────────────╲
                    │   Input N values   │
                    ╲───────────────────╱
                               │
                               ▼
                    ┌───────────────────┐
                    │    i=0, sum=0      │
                    └───────────────────┘
                               │
                               ▼
                          ◇────────◇
                         ╱    If    ╲      false
                         ╲  i <=N   ╱─────────────┐
                          ◇────────◇             │
                               │ true            │
                               ▼                 │
                    ┌───────────────────┐        │
                    │    Sum=sum+i       │        │
                    └───────────────────┘        │
                               │                 │
                               ▼                 │
                    ┌───────────────────┐        │
                    │      i=i+1         │        │
                    └───────────────────┘        │
                               │◄────────────────┘
                               ▼
                    ╱───────────────────╲
                    │     Print sum      │
                    ╲───────────────────╱
                               │
                               ▼
                          ┌──────────┐
                          │   Stop   │
                          └──────────┘
```

### 3. Design and create simple game using MIT-scratch/Code.org

**Make your character jump [JUMPING GAME]**

- Open scratch.mit.edu website, Go to create.

- Open panel and select a character (your choice) and select background (your choice).

- Go to motion and select change by 10 and go to control, select repeat 10 to give motion.

- Go to motion and select change by -10 and go to control, select repeat 10 and join both.

- Go to events and select when space key pressed. And place it on the top.

- Go to sound and select start sound and place in between space key press and repeat 10.

**Create 2 backdrops**

- Click on the stage icon and click on backdrop

- Rename the 1st backdrop as LOST in costume section

- Type the text T as You LOST!!!

- Duplicate the lost backdrop and rename as WON

- Type the text T as You WON!!!

**Make a moving obstacle**

- Select any obstacle (egg) change size into smaller by changing size into 80.

- Place the egg at the x axis line and go to motion and select go to x& y and drag the egg to –x position and go to motion and select glide x sec to x & y.

- Go to control and select forever and place on the go to x.

- Go to events and select when clicked, change the glide into 3 sec.

**Stop the game when it runs on to the egg.**

- Go to control and select stop all and wait until, go to sensing and select touching mouse pointer and change mouse pointer into chick.

- Go to events, select when clicked and place at the top of wait until.

- Go to chick panel and go to motion, select go to x and y and go to events, select when clicked.

- Once the egg touches the chick before the score is 5 then change the backdrop to LOST

**Keep Score**

- Go to chick panel and go to variable, select make variable and give score as variable and select change score by 1 and place at the end of code and set score to 0 and place after go to x & y.

- Once the Score becomes 5 then change the backdrop to WON and stop the game.

**CODE SECTION**

1. CHICK
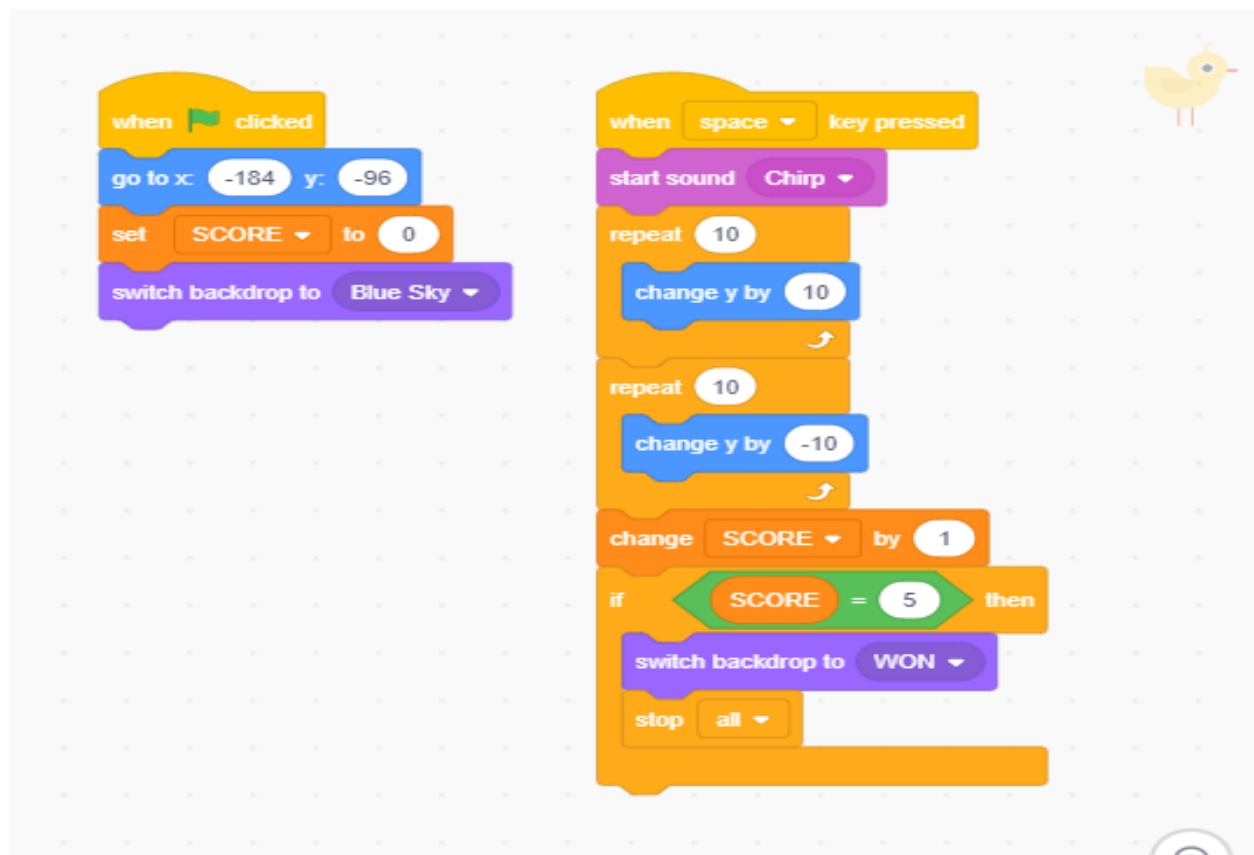


2. EGG
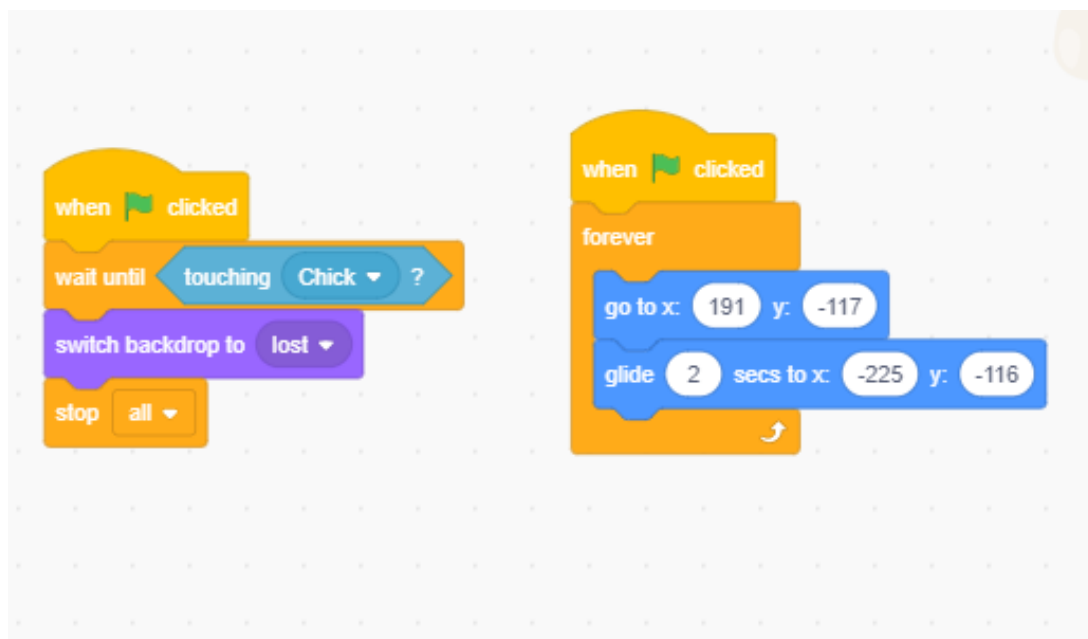
**OUTPUT:**
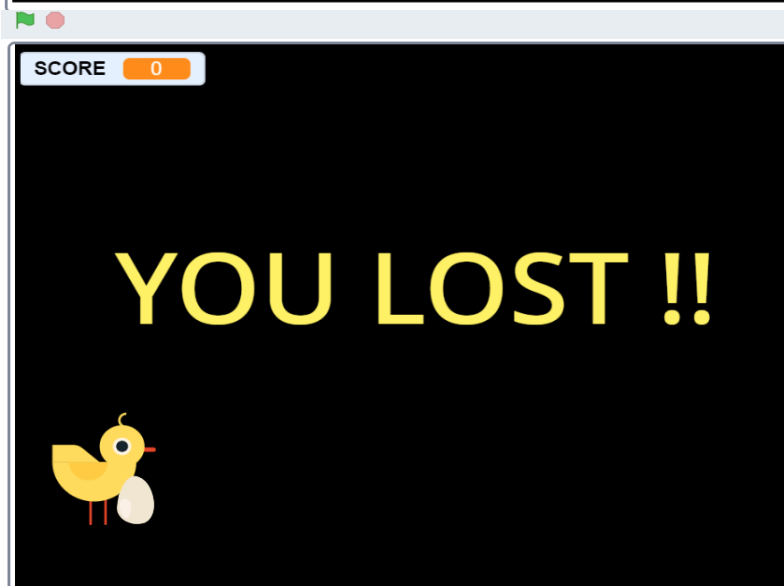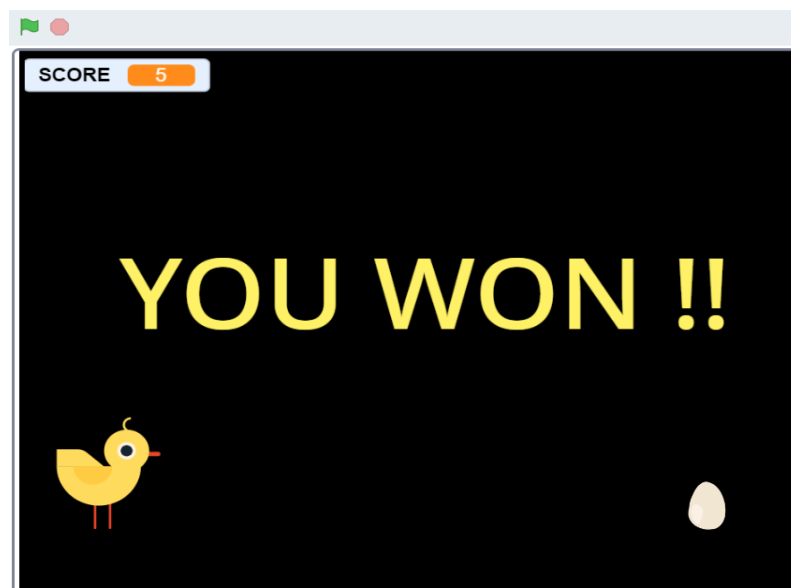
**4. Design and create simple android application (MIT App Inventor)**
    **TEXT-TO-SPEECH**

1.  Go to the App Inventor home page: www.appinventor.mit.edu
2. Click the orange "Create Apps" button in the menu bar.
3. Log in to App Inventor with your Gmail username and password.
4. Start a new project by clicking the "Start new project" button.
5. Type in the project name (underscores are allowed, spaces are not) and click OK. App Inventor opens the Designer window. The "Designer" is where you create the Graphical User Interface (GUI) or the look and feel of your app.
6. **Add a TextBox** - Click and hold on the word "TextBox" in the Palette. Drag your mouse over to the Viewer. Release the mouse. A new TextBox will appear on the Viewer.
7. **Add a button** - Click and hold on the word "Button" in the Palette. Drag your mouse over to the Viewer. Release the mouse. A new button will appear on the Viewer.
8. **Change the Text on the Button**- In the properties panel, change the text for the Button. Under the Text property, select "Text for Button 1", delete it and type in "TEXT-TO- SPEECH".
9. **Add a Text-to-Speech component** to your app- Go to the Media drawer in the Palette and drag out a "TextToSpeech" component. Drag and drop it onto the Viewer. Notice that it is present under "Non-visible components". It's more like a tool that is available to the app.
10. **Switch over to the Blocks Editor**- It's time to tell your app what to do. The Blocks Editor is where you program the behavior of your app.
11. Click and hold the **when Button1.Click do** event block. Drag it over to the Viewer and drop it there. It is called an "Event Handler".
12. Click and hold the **call TextToSpeech1.Speak** block. Drag it over to the Viewer and drop it there. This is the block that will make the phone speak. Because it is inside the **Button.Click**, it will run when the button on your app is clicked.
13. Click and hold **TextBox1.Text** and plug it into the socket labeled "message"
14. **The app is now ready for testing** – Download the **MIT AI2 Companion** app from play store and install it. Click on Connect in the menu bar and select AI Companion and scan the QR code. Be sure your both devices are connected to the same Wi-Fi network. You can also test by clicking on Build and selecting **App(save .apk to my computer).**
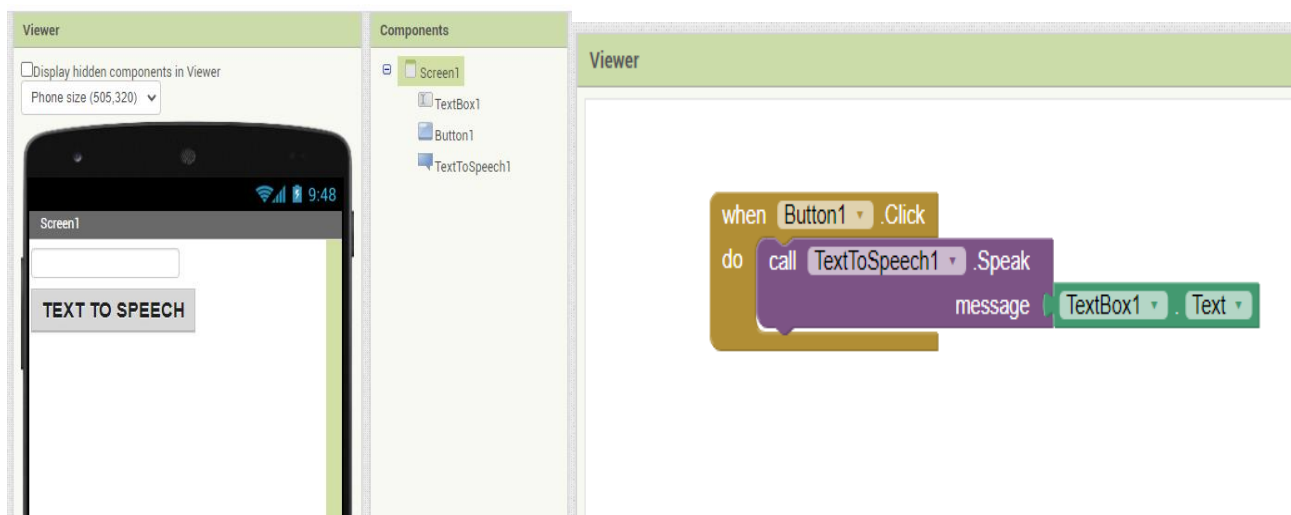
**5. Design and create webpage for displaying your poem (Title, header, paragraph, formatting tags)**

```
<html>
<head>
<title>poem</title>
</head>
<body>
  <h1 align="center">TWINKLE TWINKLE LITTLE STAR </h1>
  <h2> jane taylor 1806 </h2>
   <p> Twinkle Twinkle little star!<br/> how i wonder what you are <br/>
      up above the world so high! <br/> like a diamod in the sky </p>
<hr color="blue">
<image src="C:\ENV\star.png" width ="300" height="300" >
<br>
</body>
</html>
```

**OUTPUT:**

# TWINKLE TWINKLE LITTLE STAR

## jane taylor 1806

Twinkle Twinkle little star!
how i wonder what you are
up above the world so high!
like a diamod in the sky

**6. Design and create webpage for your wish list (what you want to do). Also list the challenges and opportunities along with the images to present your dreams (List ordered and unordered, Image, Table)**

```
<html>
<head>
  <title>WISH LIST </title>
</head>
<body>
  <h1 align="center"> MY WISH LIST </h1>
  <br> <br> <br>

  <table border="10">
  <tr>
     <th>wish list</th>
     <th>Image </th>
     <th>Brand name </th>
  </tr>

  <tr>
     <td><ol><li>LAPTOP</li></td>
     <td> <li> <image src="C:\ENV\laptop.jpeg" width="100" height="100"> </li></td>
     <td> <ul> <li> LENEVO </li>
          <li> Hp </li>
           <li> DELL </li> </td> </ul>
  </tr>
  <tr>
     <td><ol start="2"><li>SMART PHONE</li></td>
     <td> <li> <image src="C:\ENV\phone.jfif" width="100" height="100"> </li></td>
     <td> <ul> <li> SAMSUNG </li>
          <li> OPPO </li>
           <li> ONE PLUS </li>
              <li> APPLE </li></td> </ul>
  </tr>
   </table>
<br>
</body>
</html>
```

**OUTPUT:**

## MY WISH LIST

| wish list | image | brand name |
|---|---|---|
| 1. LAPTOP | | • DELL<br>• Hp<br>• lenevo |
| 2. SMART PHONE | | • OPPO<br>• APPLE<br>• ONE PLUS |

**7. Design and create webpage using HTML and CSS about an awesome animal (Use necessary CSS tags).**

```
<html>
<head>
  <title>AWESOME ANIMAL</title>
  <style type="text/css">
  .c1{background-color:yellow}
  .c2{color:red}
  .c3{font:30pt 'calibri'}
  .c4{color:green}
  </style>
</head>
<body class="c1">
<center>
    <h1>TIGER</h1>
    <p><span class="c4"> <b>Tiger is the largest member of the cat family.</b> </span> <br/>
    <span class="c2"><b>It is territorial and generally solitary.<br/>
    Tiger cubs stay with their mother for 2 years before they become independent</span></b><br/>
    Tiger population is decreasing due to <span class="c3">POACHING</span>, habitat destruction
and habitat fragmentation</p>
<image src="C:\ENV\image\tiger.jfif" width="200" height="200">
<br>
</center>
</body>
</html>
```

**OUTPUT:**
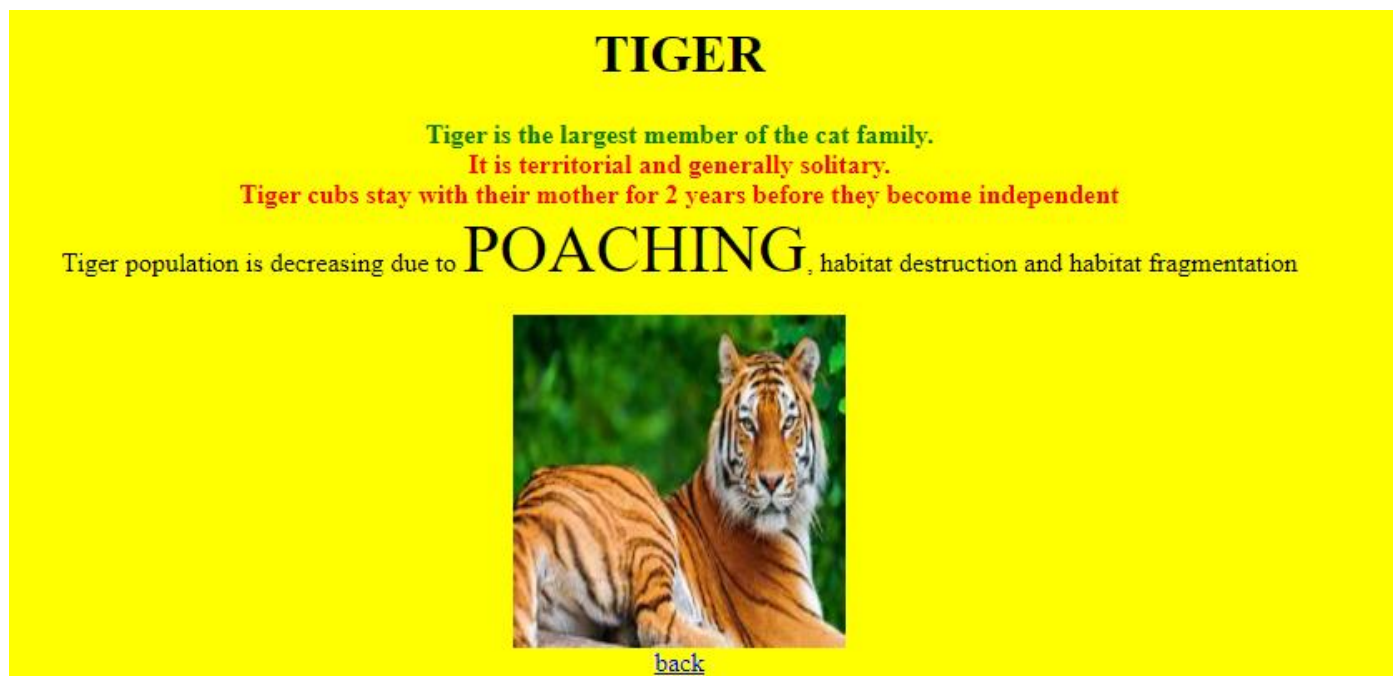
**8. Design and create to demonstrate the concept of Hyperlinking of 2 or more web pages**

*Since we have already created the html pages for poem.html, wishlist.html and CSS.html pages so we will link these 3 webpages*

**Step1. Open notepad and write the below program and save as hyperlink.html**

```
<html>
<head>
<title>HYPERLINK</title>
</head>
<body>
<h1> HYPERLINK DEMO </h1>
<br><br>
<a href="wish.html">WISH LIST LINK </a> <br> <br>
<a href="css.html">TIGER CSS LINK </a><br> <br>
<a href="poem.html">POEM LINK </a> <br> <br>
</body>
</html>
```

**Step2.** Open all 3 webpages *poem.html, wishlist.html and CSS.html* before the end of body tag add this tag.

**<a href="hyperlink.html">back</a>**

# HYPERLINK DEMO

WISH LIST LINK

TIGER CSS LINK

POEM LINK

# MY WISH LIST

| wish list | image | brand name |
|---|---|---|
| 1. LAPTOP |  | • DELL<br>• Hp<br>• lenevo |
| 2. SMART PHONE |  | • OPPO<br>• APPLE<br>• ONE PLUS |

back

## TIGER

Tiger is the largest member of the cat family.
It is territorial and generally solitary.
Tiger cubs stay with their mother for 2 years before they become independent

Tiger population is decreasing due to POACHING, habitat destruction and habitat fragmentation



back

# TWINKLE TWINKLE LITTLE STAR

### jane taylor 1806

Twinkle Twinkle little star!
how i wonder what you are
up above the world so high!
like a diamod in the sky



back

**9. Design and create web page with JavaScript to design a simple calculator to perform the following operation: Sum, Product, Difference and Quotient.**

```html
<html>
<head>
<title>CALCULATOR</title>
<script type="text/javascript">
    var a,b,r;

    function add()
    {
    a=document.myform.n1.value;
    b=document.myform.n2.value;
    a=parseFloat(a);
    b=parseFloat(b);
    r=a+b;
    document.myform.result.value=r;
    }

    function sub()
    {
    a=document.myform.n1.value;
    b=document.myform.n2.value;
    a=parseFloat(a);
    b=parseFloat(b);
    r=a-b;
    document.myform.result.value=r;
    }

    function mul()
    {
    a=document.myform.n1.value;
    b=document.myform.n2.value;
    a=parseFloat(a);
    b=parseFloat(b);
    r=a*b;
    document.myform.result.value=r;
    }

    function div()
    {
    a=document.myform.n1.value;
    b=document.myform.n2.value;
    a=parseFloat(a);
    b=parseFloat(b);
    r=a/b;
    document.myform.result.value=r;
    }
</script>
</head>
```

```
<body>
<form name="myform">
<center>
<h1>ARITHMETIC OPERATIONS </h1>
<h2><u>Enter a number in each text box</u></h2><br/><br/>
NUMBER 1: <input type="text" name="n1" value=""><br/>
NUMBER 2: <input type="text" name="n2" value=""><br/><br/>
<input type="button" value= "ADDITION" onclick="add()">
<input type="button" value= "SUBTRACTION" onclick="sub()">
<input type="button" value= "MULTIPLICATION" onclick="mul()">
<input type="button" value= "DIVISION" onclick="div()">
<br><br>
<br><br>
<font color="red">RESULT</font>
<input type="text" name="result" value="">
</center>
</form>
</body>
</html>
```

**OUTPUT:**

# ARITHMETIC OPERATIONS

## Enter a number in each text box

NUMBER 1: 20
NUMBER 2: 10

[ ADDITION ] [ SUBTRACTION ] [ MULTIPLICATION ] [ DIVISION ]

RESULT 2

**10. Design and create a personal webpage with dashboard.**

Personal web pages are world wide web pages created by an individual to contain content of a personal nature rather than content pertaining to a company, organization, or institution. Many personal pages only include information of interest to friends and family of the author.

*"Blog is a journal or diary written for public viewing on a website and consisting typically of personal reflections, commentary on current events, etc. arranged chronologically"*

- **Dashboard** – the "home base" of WordPress. This is what you seen when you log in, and it contains whatever widgets you've chosen to show on it.

- **Posts** – the heart and soul of WordPress. This is where you'll go when you want to write a blog post or edit an existing one.

- **Media** – a central repository for any pictures, sound files, video, and other pieces of media that you upload to your site. Here you can browse through and edit media you've uploaded to your posts and upload even more.

- **Pages** – here you can create Pages, which is what you'll be using for the main content on your site. Pages are different from Posts because they will show up in your site's main navigation instead of going on your list of blog posts. This makes Pages good for "timeless" content like your biography, work history, and contact info.

- **Comments** – here you can see the comments on your blog (if you decide to have one). Here we

can use Blogger or Wix website to create the blog.

When we click on **https://www.Blogger.com**, we see the image as shown below, then click on create your blog by signing in via Gmail.

- We first need Gmail id in order to create our blog.
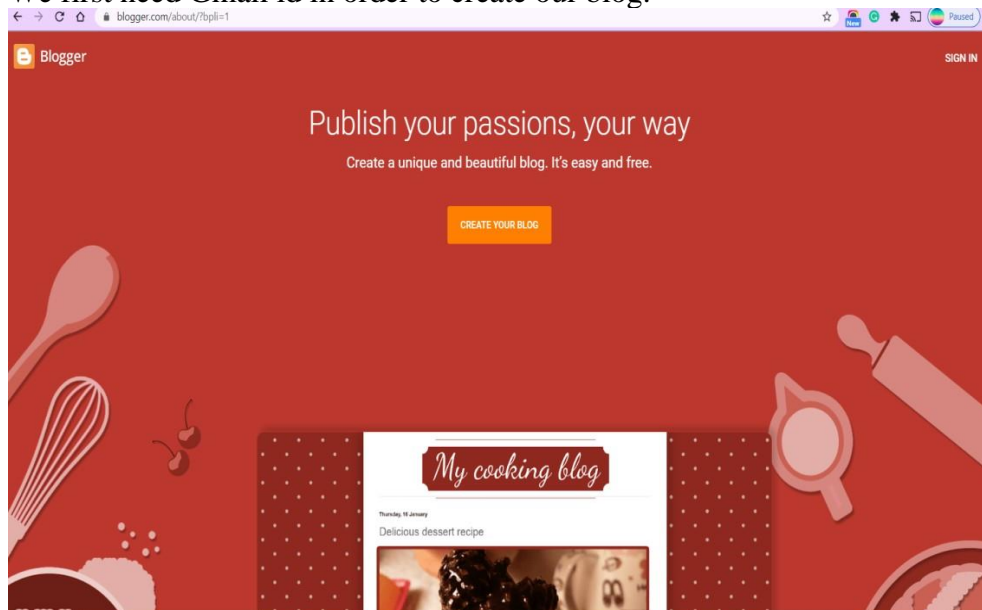
- Next after log in with your Gmail account, Create a new blog give the name of the blog
- Then create the new post, give the name of the post and type the content of the post about *personal reflections, commentary on current events, etc. arranged chronologically*
- After writing the post now you can *PUBLISH* the post
- At last, you can *share* the blog to your family and friends.

**OUTPUT**

**11. Design and create web page about advantages of business process automation with respect to your branch of engineering.**

```
<html>
<head>
<title> Advantages of business process automation </title>
<style>
h1
{
color: red;
}
h2
{
color: White;
}
p
{
color: green;
}
</style>
</head>
<body bgcolor="pink">
<h1> Advantages of business process automation with respect to Computer Science</h1>
<h2> Transportation</h2>
<p> Driver for ola and Uber as well as those who deliver for app like ola and Uber </p>
<h2> Healthcare</h2>
<p> Automation in Healthcare have helped to increase the quality of patient care</p>
<h2> Online Marketing</h2>
<p> Automation in Online Marketing helps to customer to purchase and sell goods or products
    using online applications </p>
<h2>Telecommunication</h2>
<p> Automation in Telecommunication helps to automate office system, customer service, billing
    system etc. </p>
</body>
</html>
```

**OUTPUT:**
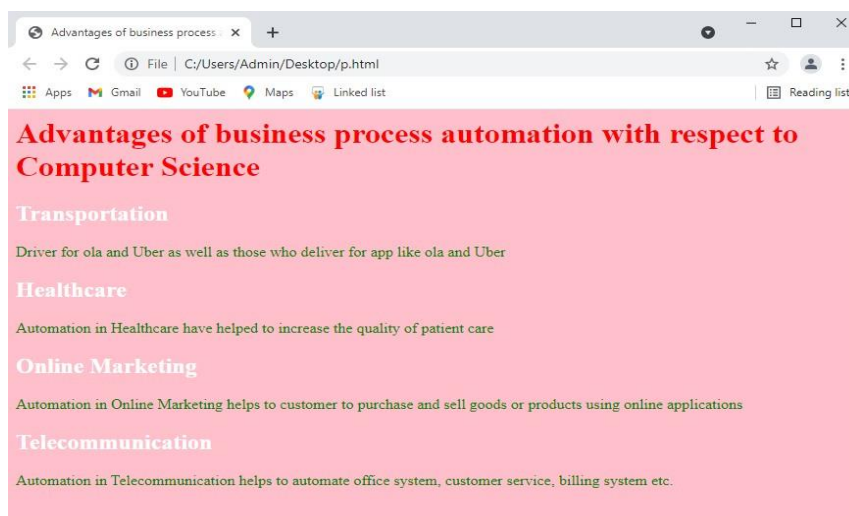
**12. Create a Workflow for Diploma Admission Process (Use any tool).**

- Login to trello using Gmail account using the link www.trello.com.

- A Homepage of trello will be displayed on page.

- Click on create new board.

- Give a board name as Diploma Admission Process and select visibility option as team.

- Create a List by click on add list button. Here we have created four list as follows.

  1. Admission Verification

  2. Document verification

  3. Verified by DTE.

  4. Approved by DTE.

- Click on add card for each list created and explain the steps involved in each process.

- Click on labels to add labels for each list.
  Green colour-> Completed.
  Yellow colour->under process.
   Red colour-> Rejected.

- Go to menu and change background

- Save workflow and Logout from trello.

**OUTPUT:**
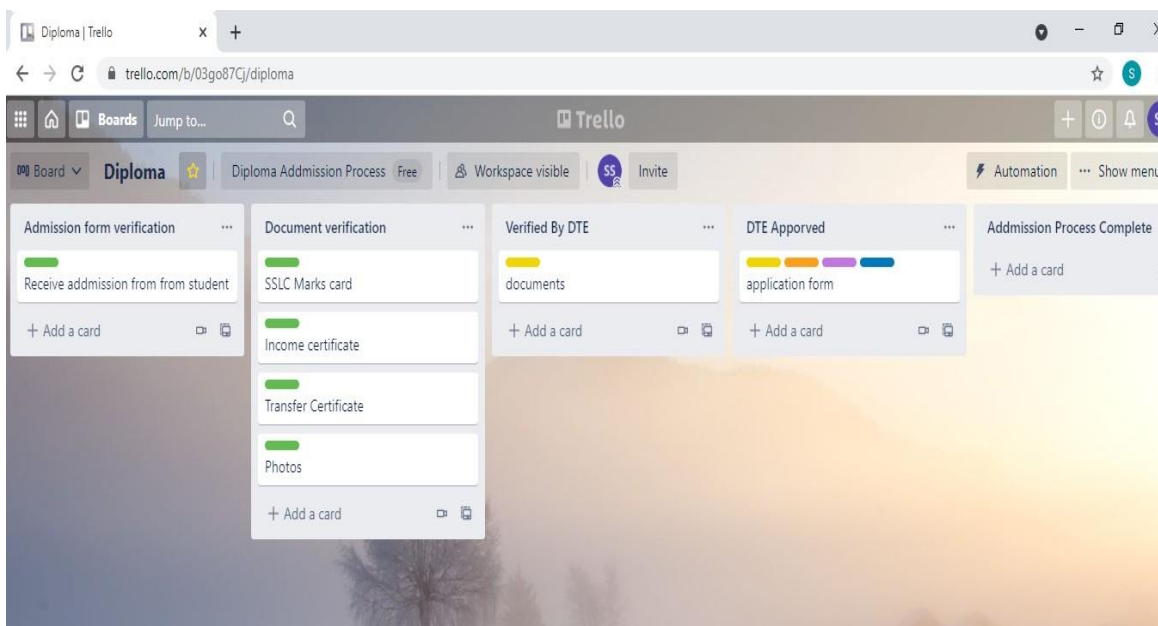
13. **Demonstrate ERP with ERPNext Demo for manufacturing, retail andservice sector (Use any other ERP tools).**

1. Open up your web browser and go to the www.odoo.com website t, login with your email id. Then Home page of odoo will display.

   **Odoo Manufacturing Flow:**

1. Creating a manufacturing order click on Manufacturing->operation-> Manufacturing Order, click on Create button.
2. Enter the details in the form
    - Product: Select product to manufacture in odoo manufacturing.
    - Quantity to Produce: Add the total quantity to produce.
    - Bill of material: add bill of material.
    - Deadline: Add deadline for production of the order.
    - Plan form: add planned date for production of the order.
    - Components: Raw material for production the product.
3. After adding all the details click on mark as to-do button for processing the order.
4. Click on Check availability->Produce.


**Odoo Sales Flow:**

1. Fill the details of customer field.
2. Click on Menu Item->configuration ->settings. Click on Quotation & Sales section -> Quotation template and save it.
3. To create your quotation->menu->Configuration tab-> Quotation template->click on create then template will create.
4. Add items under **Lines** section as per your requirement by click on **Add an Item**.
5. **Optional Products,** select **add a line.**
6. Click on **Confirmation** to choose the **Confirmation Mode** and **Confirmation Mail**.
7. **Confirmation** mode, you can choose the various options like **Online signature, Online Payment**
8. **Online Payment:** Now a customer can make an online payment and confirm the order automatically.
9. **Confirmation Mail:** This email will be sent on Confirmation.

**OUTPUT:**

**14. Create user account and demonstrate use of Google drive, Google docs, Google Co-lab(Usage of Jupyter Notebook)**

**User account in Gmail:**

1. Open up your web browser and go to the Gmail home page: http://www.gmail.com.
2. Click Create an account.
3. Fill your basic information like first name and last name
4. Type an email name into the „choose your username‟ box. If the email name requested    is not available, accept one of the alternatives and check its availability once more.
5. Create password of least 8 characters long and fill the rest of your information like birth date, Gender and mobile number.
6. Enter a CAPTCH word and fill the location.
7. Need to ensure that the „I agree to the Google terms of service and Privacy Policy‟ is ticked. Then click next step.
8. Now your email account is created and sign in with email id and password

**Sending, Receiving of E-Mails:**

1. Click on compose, a new message window will appear type To address email id, write a subject of your message. Type the message on body of window, click on attach file -> select the attachment to upload (word file, pdf, image etc.) and press send button.
2. Double click on inbox messages to open and click on uploaded attachment to download.

**Google drive:**

1. Go to drive.google.com on your computer, go to drive.google.com. You‟ll see "My Drive," which has: Files and folders you upload or sync
2. Upload files and folders to Google Drive
   Can upload files from your computer using File Upload option or create files in Google Drive.
3. Share and organize files
   Can share files or folders, so other people can view, edit, or comment on them.
4. To see files that other people have shared with you, go to the "Shared with me" section

**Google Docs**

1. Open the Docs home screen at docs.google.com.

2. Click on "Start a new document," click Blank New.

3. Formatting Text

   Using Google Docs toolbar, you can change the text, the font style and even assign specific font style for particular sections of the text. Along with this, Google Docs provides editing options like paragraph spacing and alignment.

4. Creating table of contents

   On your Google Docs click where you want the table of contents to be placed. Click Insert on the menu bar and select Table of contents. You can choose with page numbers or with blue links. In case you want to delete the table, right-click and select delete.

5. Inserting images and tables

   Choose Image from the Insert tab and select the following option – Upload, Take a snapshot, By URL, Your albums, Google Drive and Search. Make sure that the image you select must be less than 50 MB and should be one of the following file formats – .gif, .jpg or .png.To undo or redo an action, at the top, click Undo or Redo.
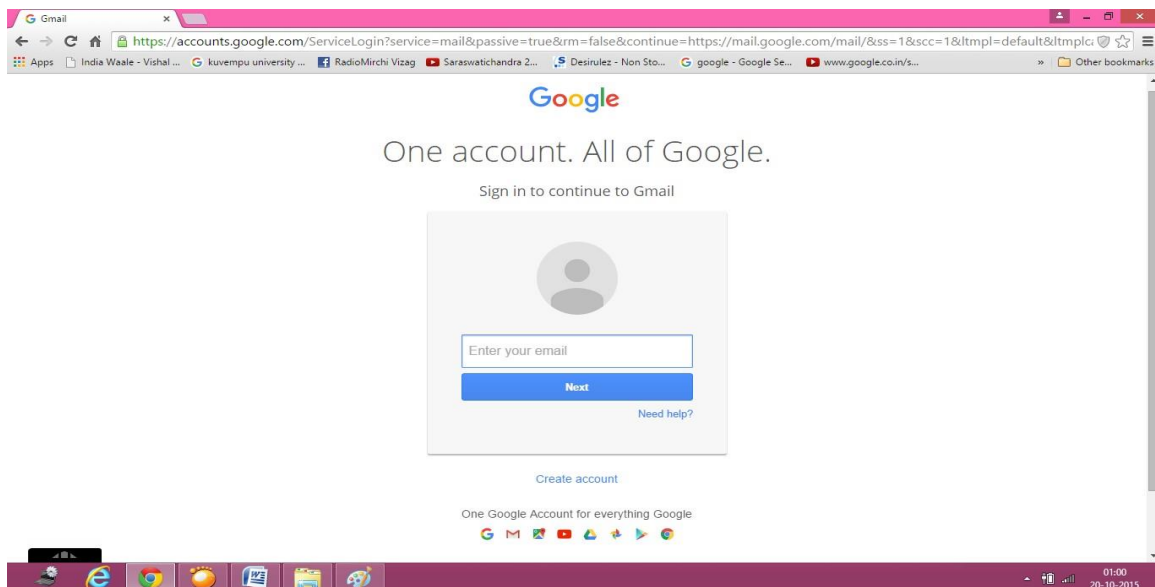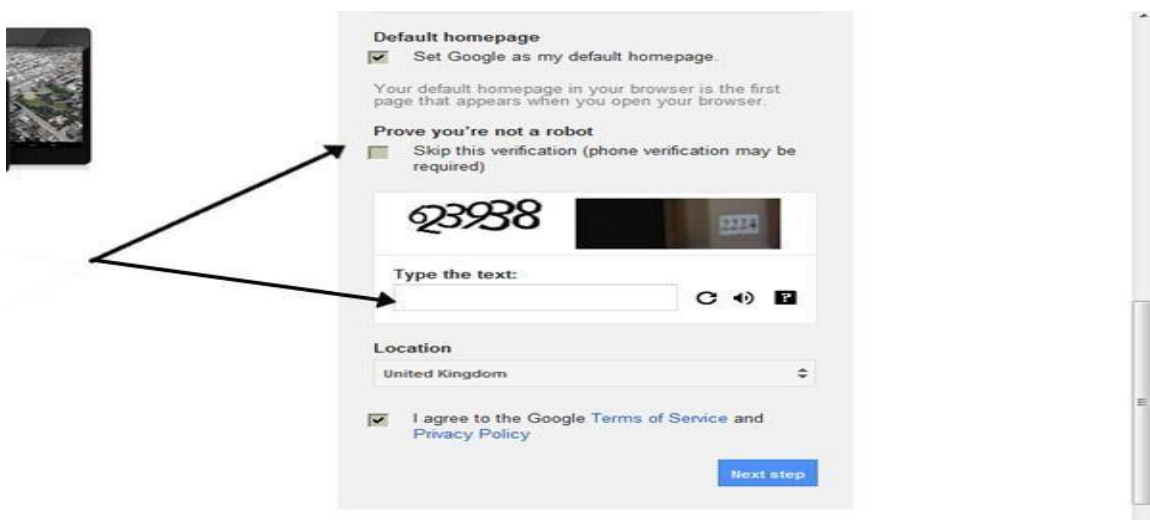
6. Share & work with others

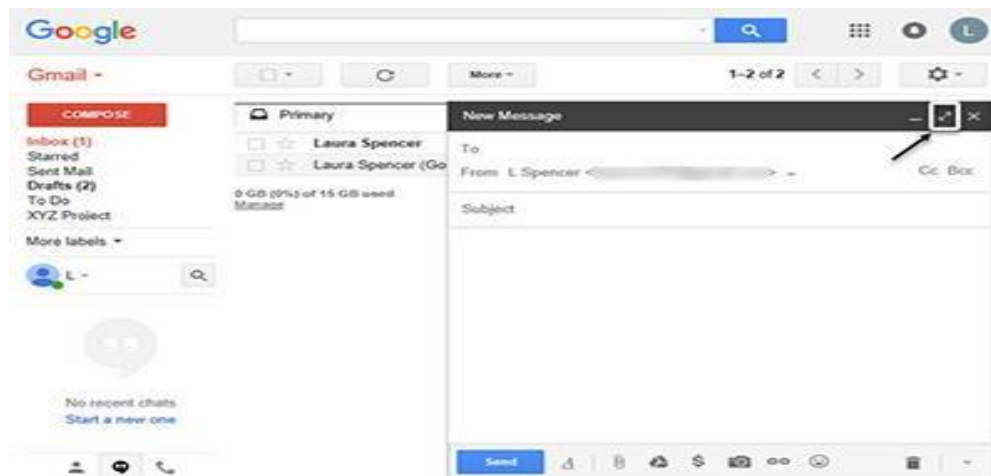   Can share files and folders with people and choose whether they can view, edit, or comment.

**Google Colabs (Google Co-laboratory)**

1. Open https://colab.research.google.com to open your Google colab.

2. Click on the NEW PYTHON 3 NOTEBOOK link at the bottom of the screen. A new notebook would open up as shown in the screen below.

3. To rename the notebook, click on this name and type in the desired name in the edit box.

4. Enter a trivial Python code in the code window and execute it.

5. To execute the code, click on the arrow on the left side of the code window.

6. To add more code to your notebook selects Insert / Code Cell.

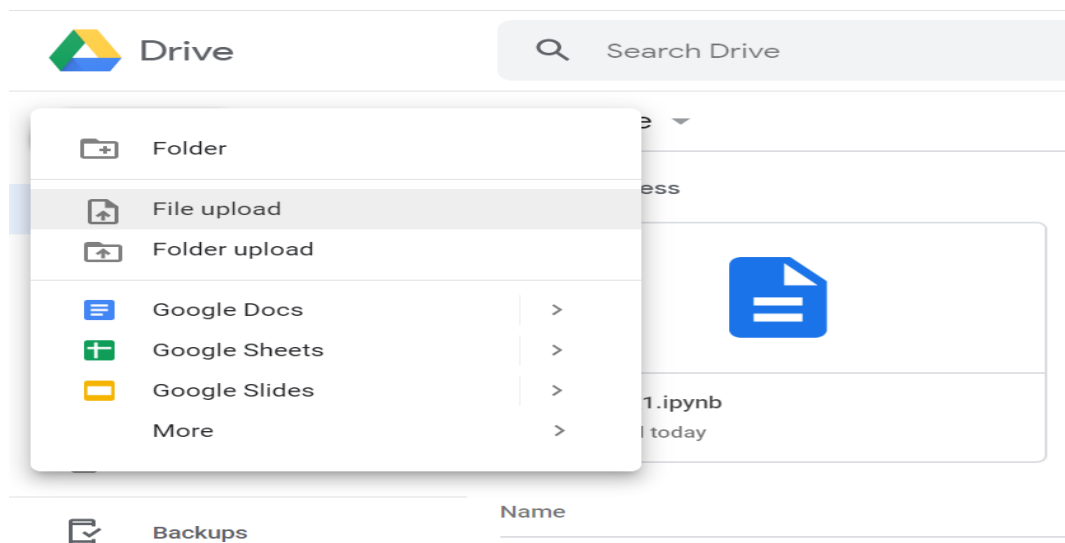7. Click on the Delete cell option and the current cell will be deleted.

**OUTPUT:**

**Sending Mail:**



**Google Drive:**



**Google Docs:**
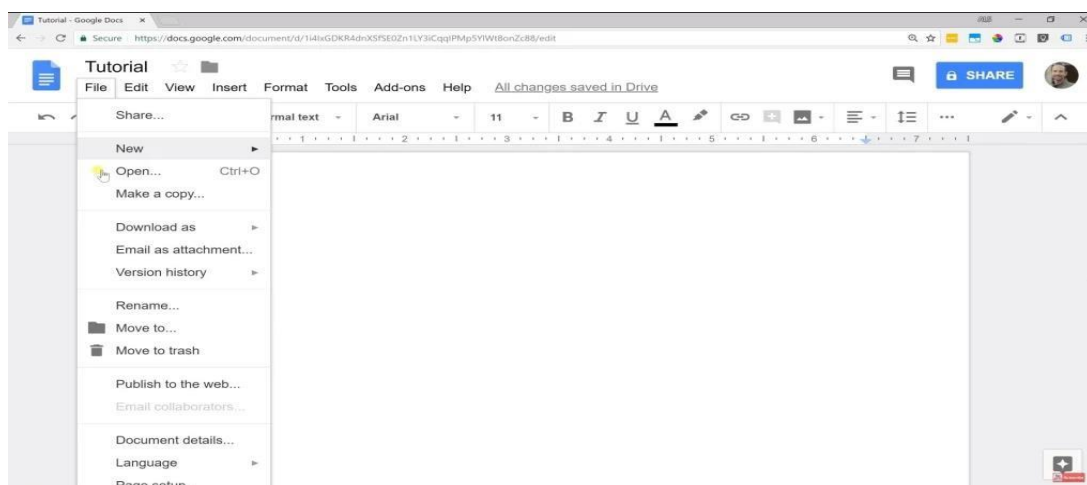
**Google Co Labs:**
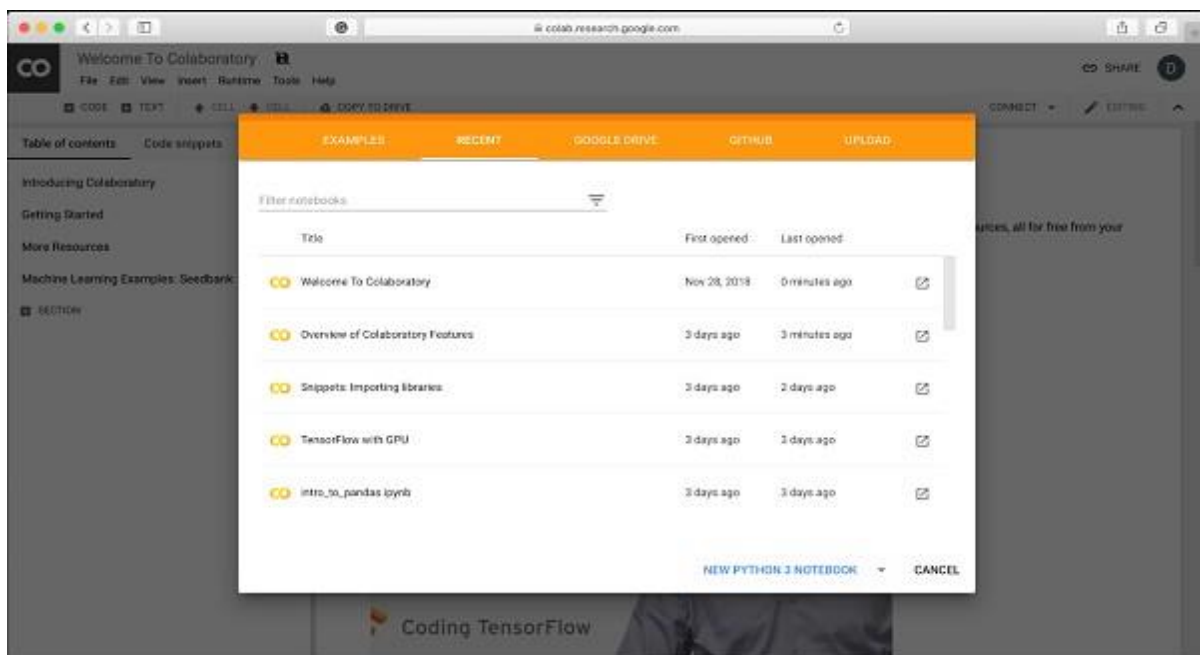


**New document in Google Co labs:**

**Delete a cell in Google Co labs:**

### 15. Demonstrate Internet of Things(IOT) using with examples

**A. Smart Home:**

- **Smart Lighting:** Smart lights helps in saving energy by adapting the lighting to the ambient condition and switching ON/OFF or diming the light when needed.
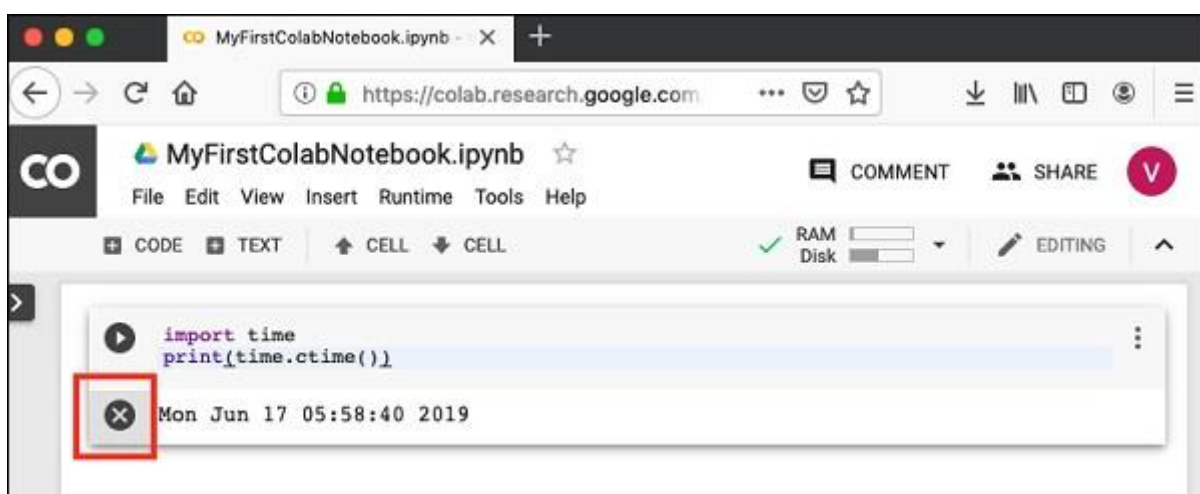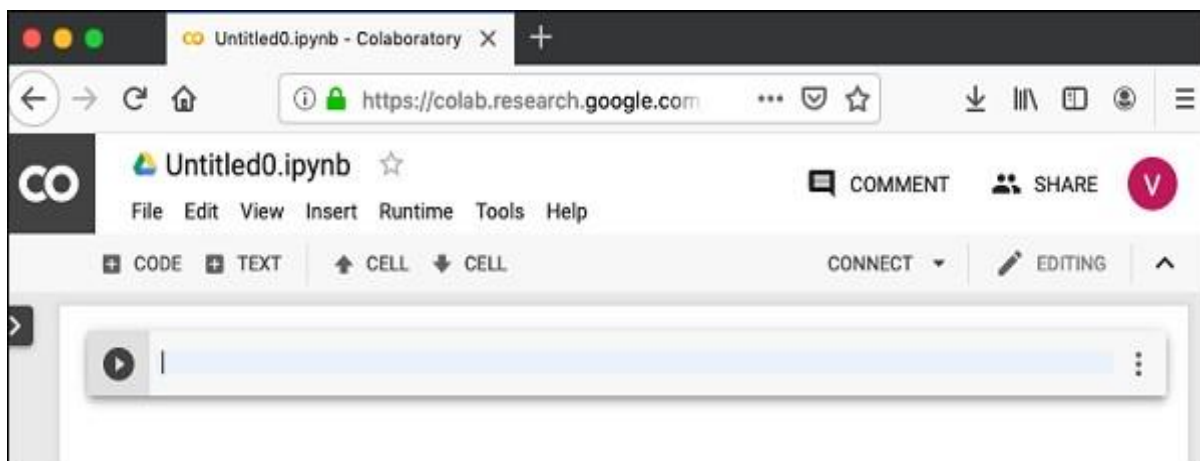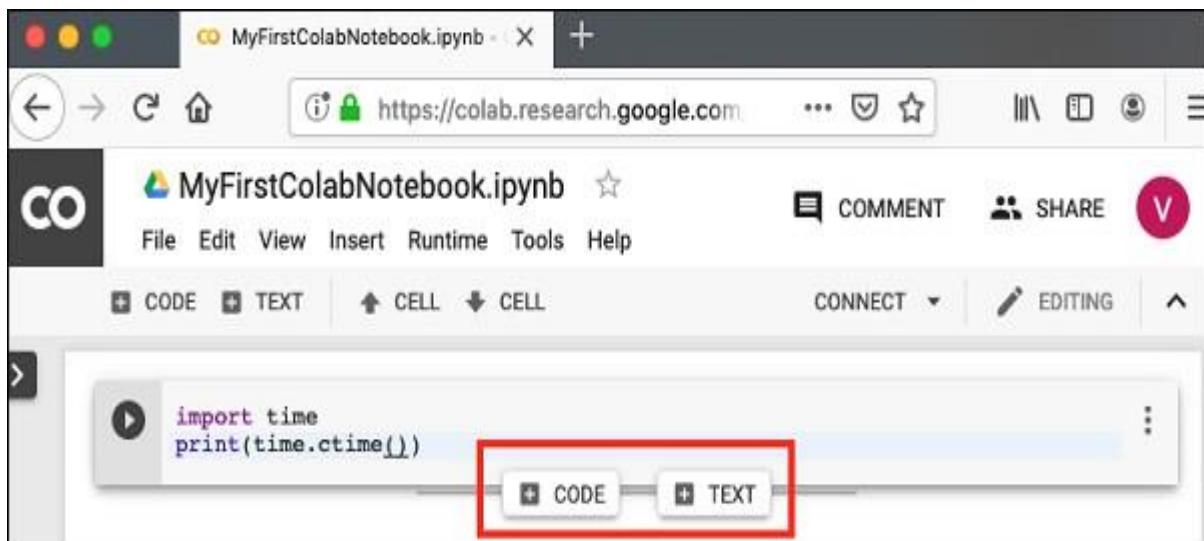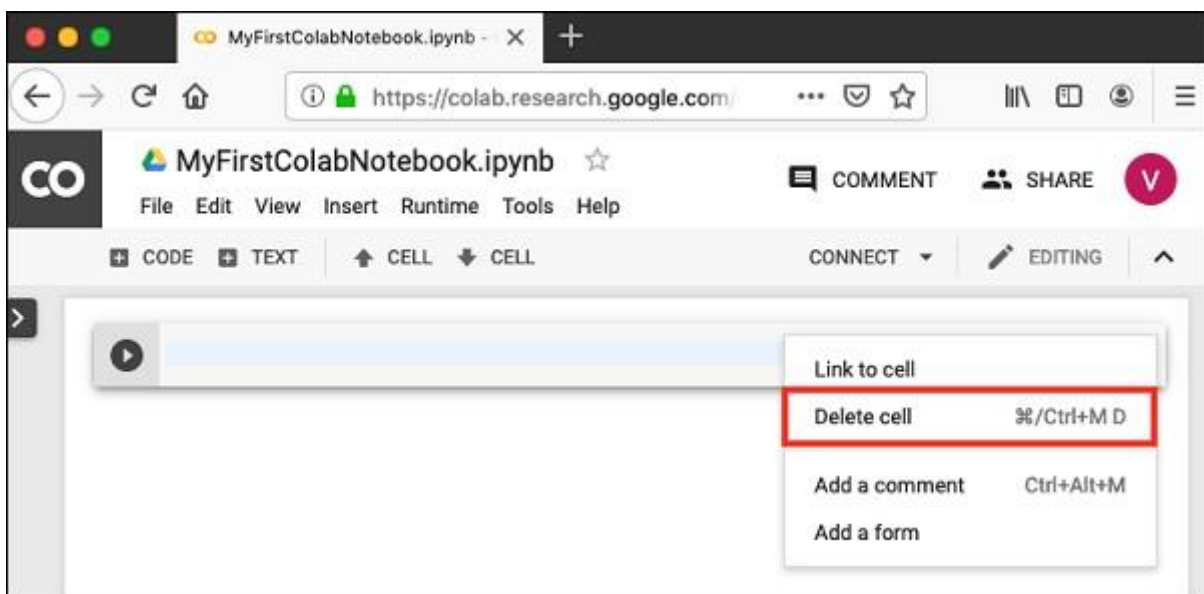
- **Smart Appliances**: Modern Homes have a number of appliances such as TV, Refrigerator, and Music System etc. It helps to make management easier and also provide status information to the user remotely.

- **Intrusion Detection:** This system use security cameras, sensors to detect intrusion and raise alert. Alert can be in the form of an SMS or email sent to user.

- **Smoke or Gas Detection:** Smoke detectors are installed in Homes to detect smoke that is typically an early sign of fire. Alerts can be in the form of signals to fire alarm, Gas detectors can detect the presence of harmful gases such as CO, LPG etc.

**B. Smart City:**

- **Smart Parking:** It makes the search for parking space easier and convenient for drivers. Smart parking is powered by IOT system that detects the number of empty parking slot and sends information over the internet. To smart application back ends.

- **Smart Roads:** Smart Roads are equipped with the sensors can provide information on driving condition, travel time estimating and alert in case of poor driving condition, traffic condition and accidents.

- **Structural Health Monitoring:** I use a network of sensors to monitor the vibration level in the structures such as bridges and buildings.

- **Surveillance:** This infrastructure helps in public transport and events in cites is required to ensure safety and security.

**C. Smart Farming:**

- **Smart Irrigation:** It helps to determine moisture amount in soil.

- **Green house control:** The use of IOT sensors enables them to get accurate real time information on greenhouse condition such as lighting, temperature soil condition and humidity.

- **Monitoring of climate condition:** Smart auricular gadgets, farming sensors are used to map climate conditions, choose appropriate crops etc.

- **Crop Management:** It helps to monitor crop growth and effectively prevent any diseases or infestations that can harm your yield.

## 16. Installation of Antivirus software

There are many antivirus software are available in market like Avast, Mcfree, 360Total Security, Kaspersky, AVG etc.

Here we are considering 360TotalSecurity antivirus for installation.

1. Open the web browser and download free 360TotalSecurity antivirus.
2. Locate your program under the "Products" tab on the 360 Total Security website. Click the "Download" button to download the anti-virus software for free.
3. Once the program downloads, locate the installer file and double click to open.
   360 Total Security: 360TS_Setup_Mini
4. Select your language option and click "Install" to continue the installation process.
5. After installation click on start to setup antivirus.
6. Using antivirus software can perform operation like virus scan, clean-up, speed up etc.

**OUTPUT:**
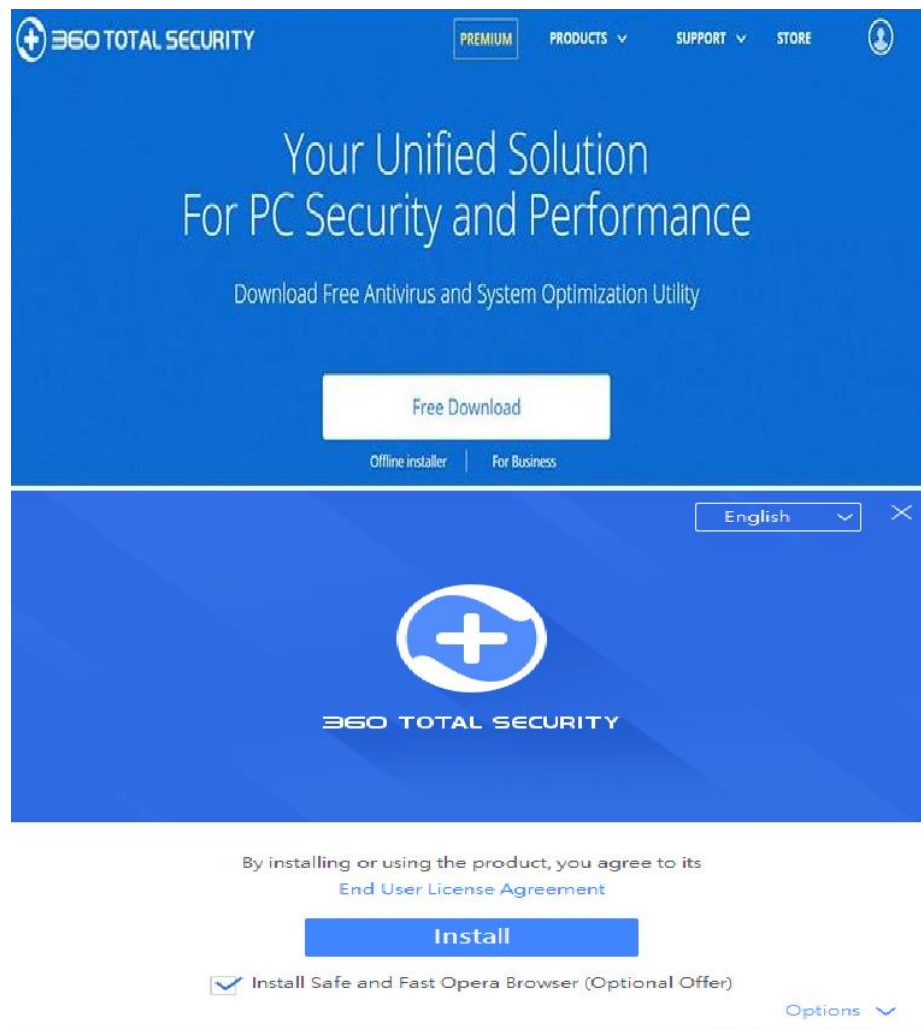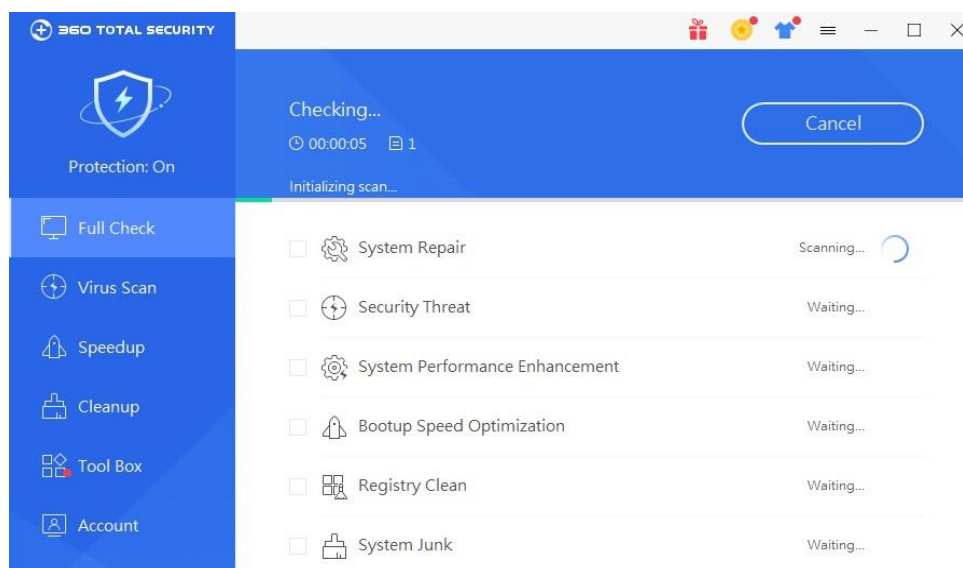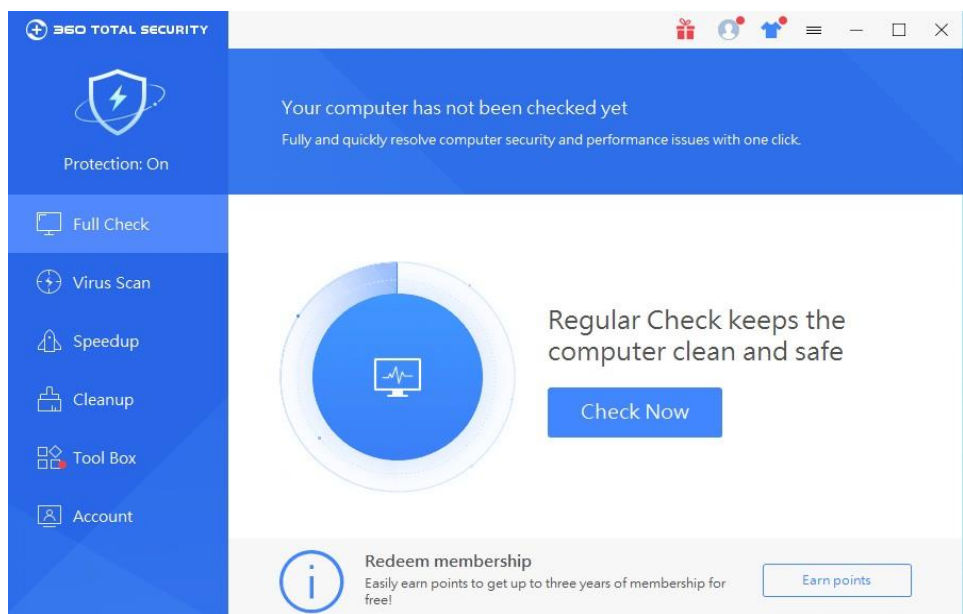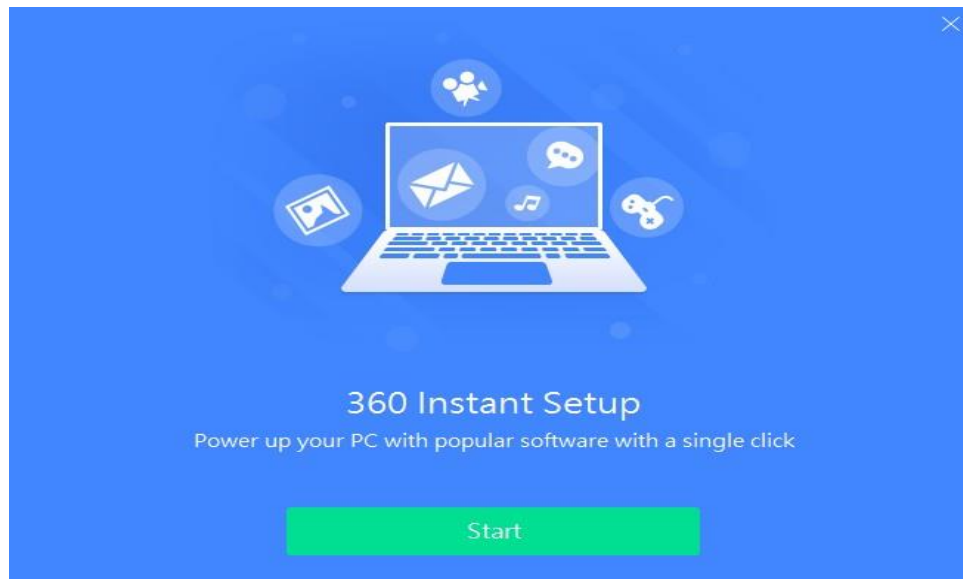
**17. Demonstration and hands on browser setting.**

The different examples of web browser are Google chrome, Internet Explorer, Mozilla Firefox etc.

Here the following steps involves browser setting for Google chrome for secure browsing.

1. **Setting the default browser:** Go to Setting and click the make Google chrome My Default Browser button.

2. **Auto download updates:** Google chrome automatically updates whenever it detects the latest new version of browser is available**.**

3. **Enable phishing and malware protection:** Go to Advanced Settings-> Privacy-> enable phishing and malware protection.

4. **Don't sync:** Disconnect your email account from your browser under the "Personal Stuff" tab. Syncing your email account with your Chrome browser means that personal information such as passwords, auto fill data, preferences, and more is stored on Google's servers.

5. **Configure content settings:** Click Content settings under the Privacy section and do the following.
   *Cookies*: Select Keep local data only until I quit my browser and Block third-party cookies and site data.".
   *JavaScript*: Select "Do not allow any site to run JavaScript."
   *Pop-ups*: Select "Do not allow any site to show pop-ups.
   *Location*: Select "Do not allow any site to track my physical location."

7. **Do not Save Passwords:** Go to setting-> Passwords and turnoff offer to save passwords.

8. **Camera Access:** Got o Setting-> Advanced-> content setting->camera and turn on Ask before accessing (recommended).

9. **Microphone Access:** Got o Setting-> Advanced-> content setting->Microphone and turn on Ask before accessing (recommended).

10. **Automatic Downloads:** Go to Setting-> Advanced-> content setting->Automatic downloads and turn on Ask when a site tries to download files after the first file (recommended).

## 18. Demonstration and hands on Privacy setting and Password Policy.

1. **Password Protect for Everything:** The entire digital device like computer, tablets, smart phones or any other gadget with personal data on them should be password protected for increased security.

2. **Keep the Computer Virus free:** The operating system is up to date with latest security patches, run an antivirus program to watch for virus.

3. **Secure you're Browser:** Browser is the one to interact with digital world, so it is necessary to do all security setting to keep browser safe.

4. **Use only trusted software:** Make sure that new software to install in system or mobile device should be licensed.

5. **Use only secure Wi-Fi Connection:** Make sure to use secured internet connection so that data should be safe.

## 19. Demonstrate of common Security Threats:

### 1. Phishing:

Phishing is a type of social engineering attack used to steal user data including login details and credit card details. It occurs when an attacker as a trusted entity, dupes a victim into opening an email, instant message or text message. The recipient is then tricked into clicking a malicious link or the revealing of sensitive information.

**Video Link:** https://www.youtube.com/watch?v=Y7zNlEMDmI4

### 2. DOS(Denial of Service) attack:

A denial of service attack is an attack to shutdown a machine or network, making it inaccessible to its intended users. DOS attacks accomplish by flooding the target with traffic or sending the target with traffic or sending it information that triggers a crash.

**Video Link:** https://www.youtube.com/watch?v=ilhGh9CEIwM

### 3. Man in the middle attack:

Man in the middle attack allows attackers to securely intercept communications or alter them. Man in the middle attack finds a way between user and an entity and attempts to hack information  Ex: Email Hijacking.

Video Link: https://www.youtube.com/watch?v=Ua9bUqdjWBc

4. **Eavesdropping:**

Eavesdropping is a theft of information as it is transmitted over a network by a computer, Smartphone or another connected device.

This attack takes advantages of unsecured network communications to access data as it"s is being sent or received by its user.

5. **Spamming:**

Spamming is the use of messaging system to send a spam to large number of recipients. Sending an unwanted email or message to another spam includes adverting, instant messaging etc. A person who creates spam is called a spammer.

6. **Virus:**

A computer virus is a type of malicious code or program written to alter the way a computer operators and is designed to spread from one computer to another computer.

A virus cause unexpected or damaging effects such as harming the system software by corrupting data.

Types of Computer Viruses:
- Resident Virus
- Multipartite Virus
- Direct Action Virus
- File Infector
- Network Virus
- Web Scripting Virus