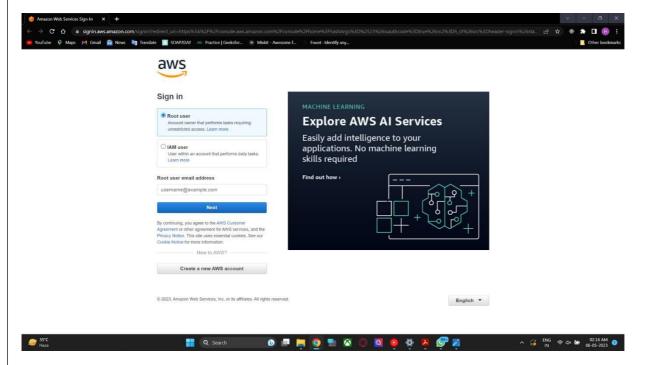
Implementation

Step 1 :- Sign in to AWS Account

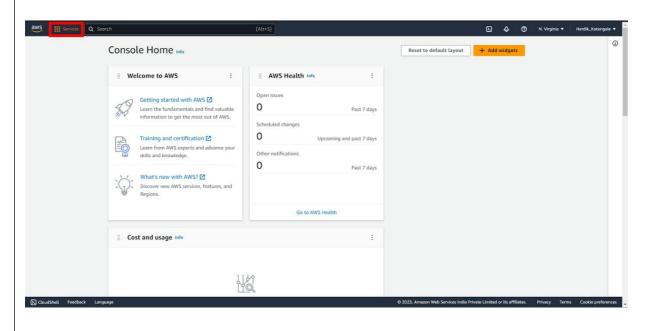
https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsolee%2Fhome%3FhashArgs%3D%2523%26isauthcode%3Dtrue%26nc2%3Dh_ct%26src%3Dheadersignin%26state%3DhashArgsFromTB_eu-north-

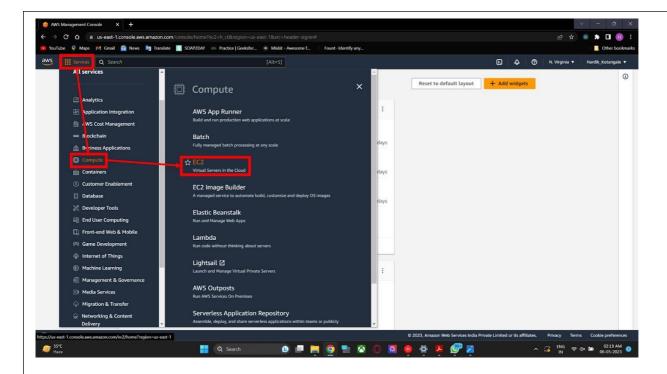
1_522611e77e2d291b&client_id=arn%3Aaws%3Asignin%3A%3A%3Aconsole%2Fcanvas&forceMobileApp=0&code_challenge=9IbjLkDwSPZ5p9SWe-

PveqynNv5PaUI_IIBU2gzi6dU&code_challenge_method=SHA-256

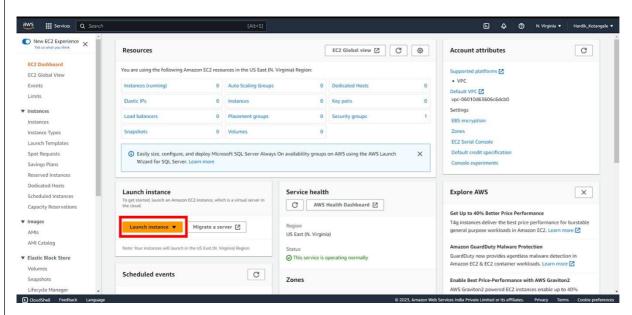


Step 2:-To run an instance, you can navigate to the AWS services menu, select the "Computing" option, and then choose "EC2". This will take you to the EC2 dashboard where you can launch and manage your instances.

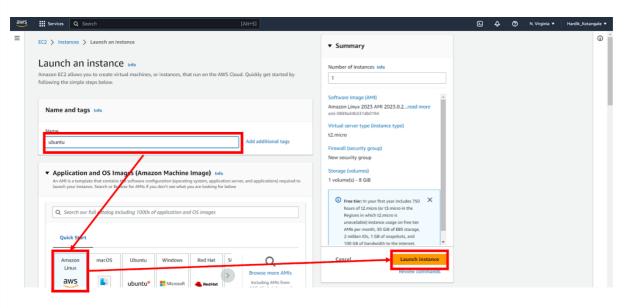




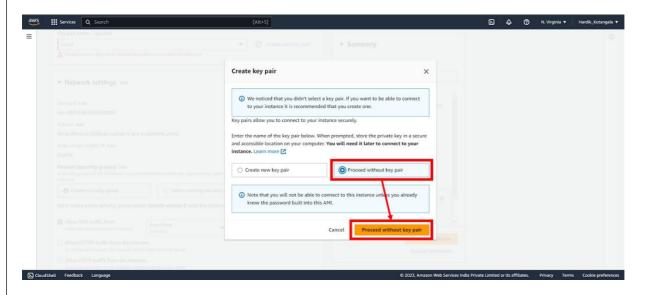
Step 3:- To set up the instance, we have to click on "Launch Instance".



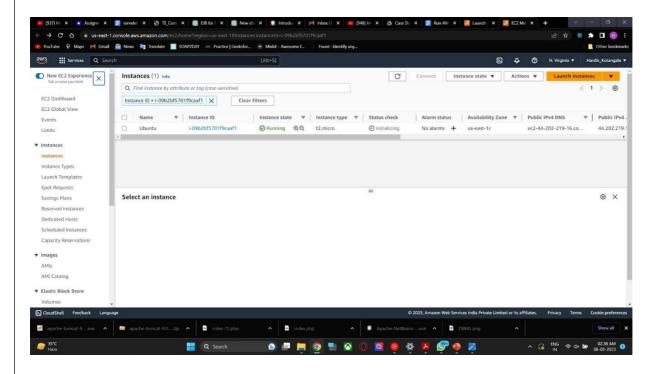
Step 4:- You need to provide a name for the instance. From there, you can select the operating system or application that you want to run on the instance. Then click on launch instance

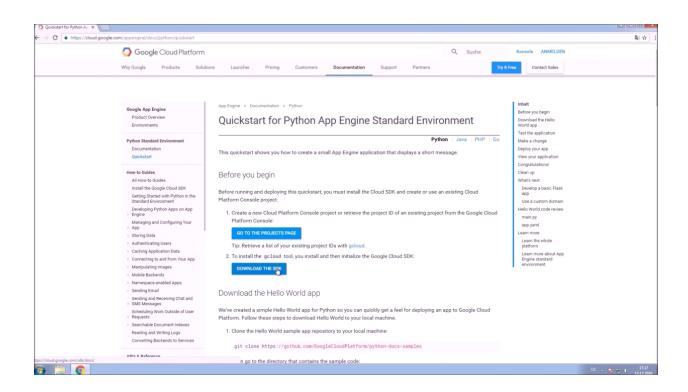


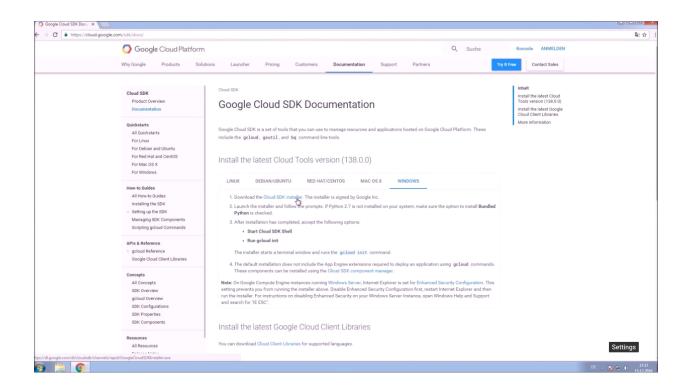
Step 5:-To proceed without a key pair, select the "Proceed without a key pair" option and click on it.

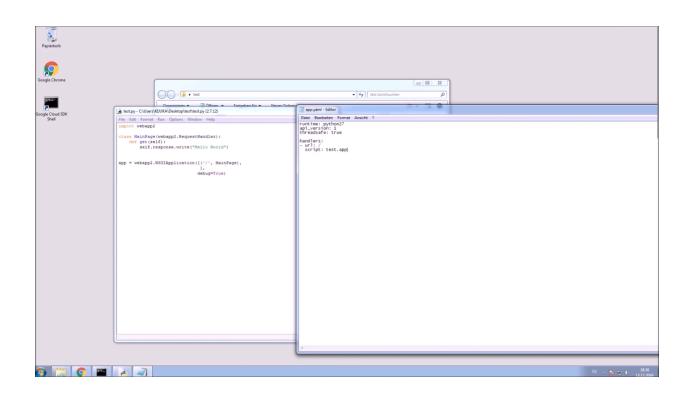


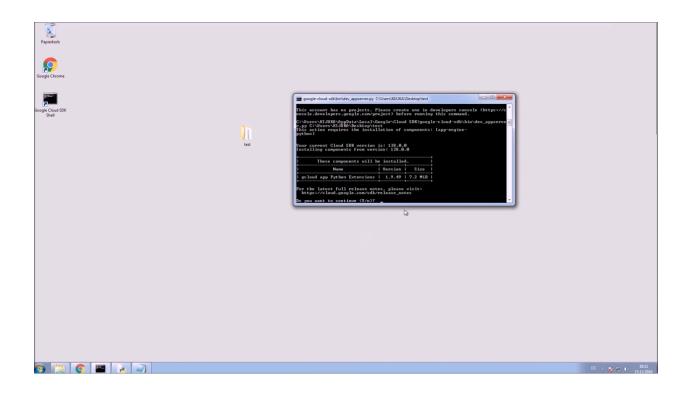
Step 6:- Monitor your instance

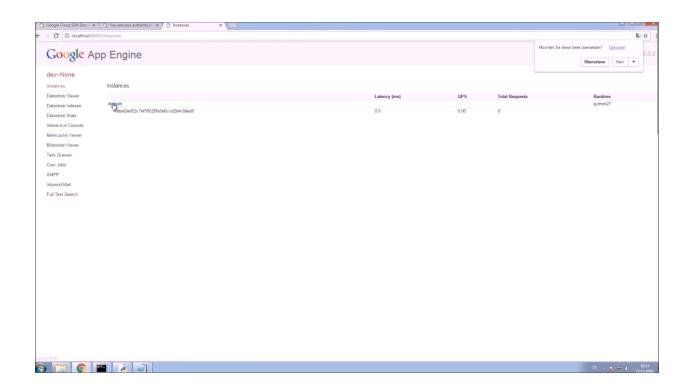


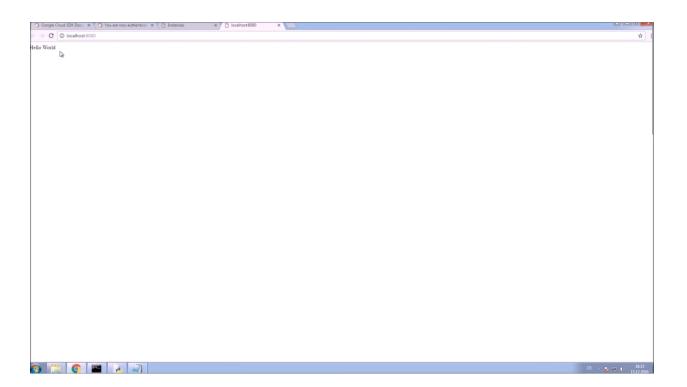












AgeCalculator.apxc

```
public class AgeCalculator {
  public Date birthdate {get; set;}
  public integer result {get; set;}

// Define a method to calculate the age in years based on a birthdate
  public void calculateAge() {
    Date today = Date.today();
    Integer years = today.year() - birthdate.year();
    if (birthdate.month() > today.month() ||
        (birthdate.month() == today.month() && birthdate.day() > today.day())) {
        years--;
    }
    result = years;
}
```

AgeCalculator.vfp

```
<apex:page controller="AgeCalculator">
<apex:sectionHeader subtitle="Age Calculator"/>
<apex:form >
<apex:pageBlock >
<apex:pageBlockButtons location="bottom">
<apex:commandButton value="Calculate" action="{!calculateAge}" reRender="res"/>
</apex:pageBlockButtons>
<apex:pageBlockSection title="Calculator">
<apex:inputText label="Date Of Birth" html-placeholder="Date Of Birth" value="{!birthdate}"/>
<apex:outputText label="Age" value="{!result}" id="res"/>
</apex:pageBlockSection>
</apex:pageBlockSection>
</apex:pageBlockSection>
</apex:pageBlock>
</apex:pageBlock>
</apex:pageBlock>
</apex:pageBlock>
</apex:pageSection>
</apex:pageBlock>
</apex:pageSection>
</ap>
```



Age Calculator

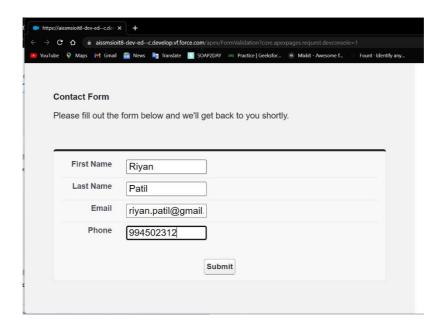


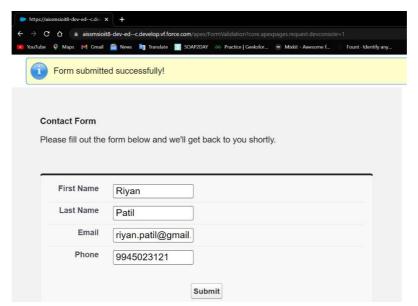
FormValidation.apxc

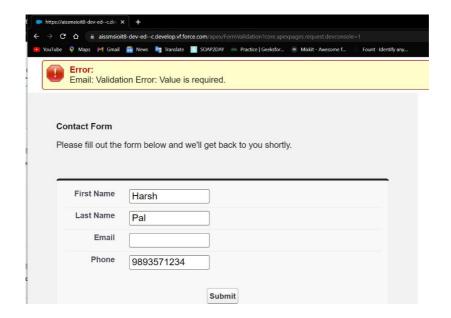
```
public class FormValidation {
  public String firstName { get; set; }
  public String lastName { get; set; }
  public String email { get; set; }
  public String phone { get; set; }
  public void submit() {
    // Perform form validation
    if (String.isBlank(firstName)) {
       ApexPages.addMessage(new ApexPages.Message(ApexPages.Severity.ERROR,
'First name is required.'));
    if (String.isBlank(lastName)) {
       ApexPages.addMessage(new ApexPages.Message(ApexPages.Severity.ERROR,
'Last name is required.'));
    if (String.isBlank(email) | !Pattern.matches('[a-zA-Z0-9. %+-]+@[a-zA-Z0-9.-]+\\.[a-
zA-Z]{2,}', email)) {
       ApexPages.addMessage(new ApexPages.Message(ApexPages.Severity.ERROR,
'Please enter a valid email address.'));
    if (String.isBlank(phone) | !Pattern.matches('\\d{10}', phone)) {
       ApexPages.addMessage(new ApexPages.Message(ApexPages.Severity.ERROR,
'Please enter a valid phone number.'));
     }
    // If there are no validation errors, save the form data
    if (ApexPages.getMessages().isEmpty()) {
       // Code to save the form data
       // ...
       ApexPages.addMessage(new ApexPages.Message(ApexPages.Severity.INFO, 'Form'
submitted successfully!'));
}
```

FormValidation.vfp

```
<apex:page controller="FormValidation" showHeader="false" sidebar="false" >
  <apex:form style="align-items:center;">
    <apex:pageMessages />
    <div style="padding: 40px; width: 50%; background-color: #f2f2f2;">
      <h2 style="margin-bottom: 10px;">Contact Form</h2>
      Please fill out the form below and we'll get back to
you shortly.
       <apex:pageBlock >
         <apex:pageBlockSection columns="1">
           <apex:inputText value="{!firstName}" label="First Name" required="true"</pre>
style="width: 30%;" />
           <apex:inputText value="{!lastName}" label="Last Name" required="true"</pre>
style="width: 30%;" />
           <apex:inputText value="{!email}" label="Email" required="true" style="width:</pre>
30%;"/>
           <apex:inputText value="{!phone}" label="Phone" required="true" style="width:</pre>
30%;"/>
         </apex:pageBlockSection> < div style="text-align: center; margin-top: 20px;">
         <apex:commandButton value="Submit" action="{!submit}" styleClass="my-</pre>
button" />
         </div>
       </apex:pageBlock>
    </div>
  </apex:form>
</apex:page>
```



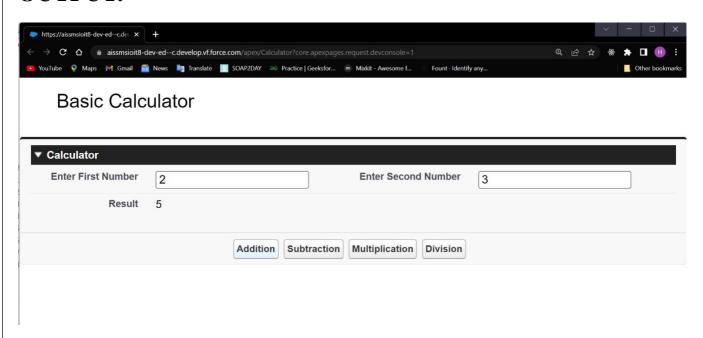


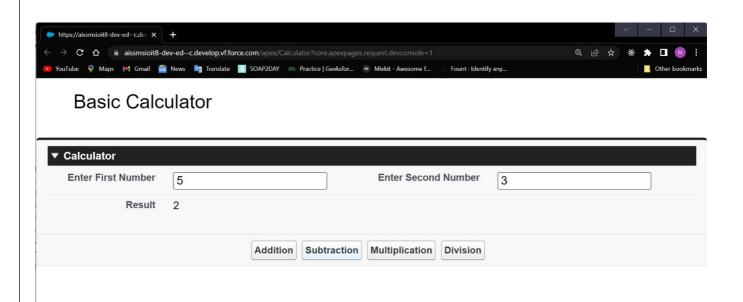


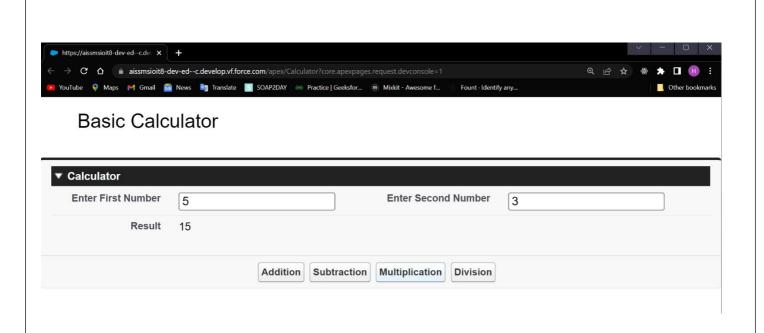
Calculator.apxc

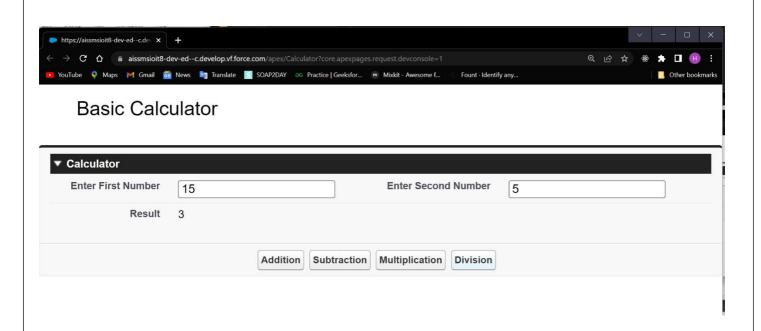
Calculator.vfp

```
<apex:page controller="Calculator">
<apex:sectionHeader subtitle="Basic Calculator"/>
<apex:form>
<apex:pageBlock >
<apex:pageBlockButtons location="bottom">
<apex:commandButton value="Addition" action="{!addition}" reRender="res"/>
<apex:commandButton value="Subtraction" action="{!subtraction}" reRender="res"/>
<apex:commandButton value="Multiplication" action="{!Multiplication}" reRender="res"/>
<apex:commandButton value="Division" action="{!Division}" reRender="res"/>
</apex:pageBlockButtons>
<apex:pageBlockSection title="Calculator">
<apex:inputText label="Enter First Number" html-placeholder="First Number"</pre>
value="{!firstNumber}"/>
<apex:inputText label="Enter Second Number" html-placeholder="Second Number"
value="{!secondNumber}"/>
<apex:outputText label="Result" value="{!result}" id="res"/>
</apex:pageBlockSection>
</apex:pageBlock>
</apex:form>
</apex:page>
```









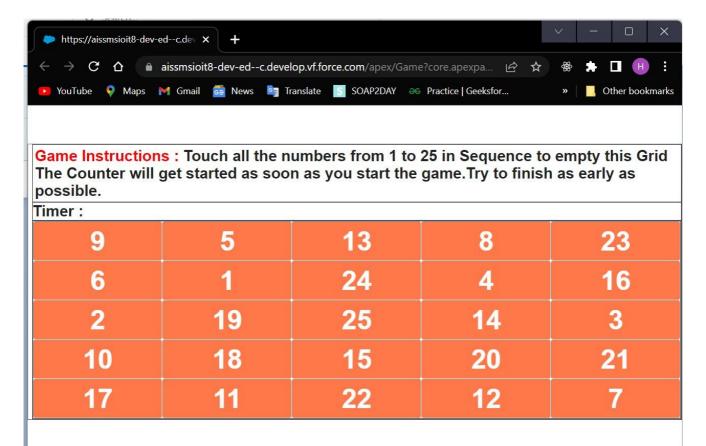
Game.apxc

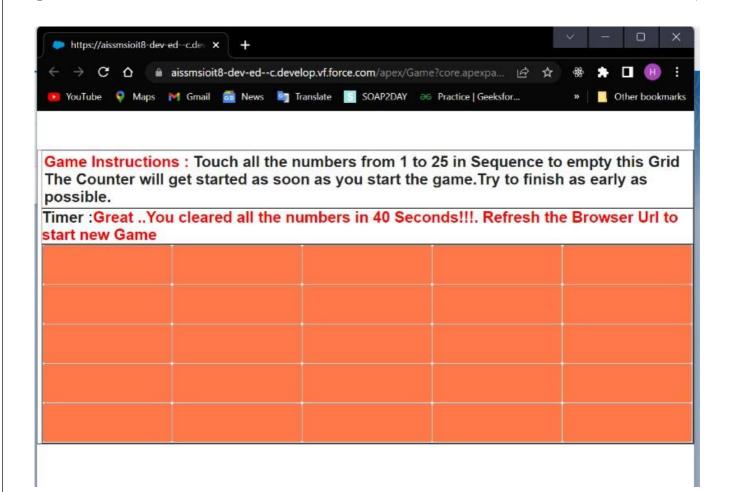
```
public class Game {
  public integer counter {get;set;}
  public integer totalCleared { get;set; }
  public Integer secCount {get;set;}
  public Set<Integer> alreadyUsed { get;set; }
  public List<Integer> shuffledNumbersByCh {get;set;}
  Public List<List<Integer>> numberList {get;set;}
  public Game () {
    totalCleared = 1;
    shuffleNumbers();
  public void shuffleNumbers() {
    //set the range of numbers from to N
    Integer lsitSize = 25;
    alreadyUsed= new Set<Integer>();
    shuffledNumbersByCh = new List<Integer>();
    while(shuffledNumbersByCh .size() < lsitSize){
       shuffledNumbersByCh .add(getRandom(lsitSize));
    }
    for(integer i=0; i< shuffledNumbersByCh.size(); i++) {
       shuffledNumbersByCh[i] = shuffledNumbersByCh[i]+1;
    system.debug('Final shuffled Numbers'+shuffledNumbersByCh);
    numberList = new List<List<Integer>>();
    List<Integer> rowList = new List<Integer>();
    Integer i = 0;
    for(integer i = 0; i < 24; i++) {
       J = i + 1;
       rowList.add(shuffledNumbersByCh[i]);
       if(Math.Mod(i,5) == 0) {
         numberList.add(rowList);
         rowList = new List<Integer>();
       }
     }
  public Integer getRandom(Integer shuffledMaxNumber){
    Integer randomNum;
    do {
       randomNum = (math.random() * shuffledMaxNumber).intValue();
```

```
} while (alreadyUsed.contains(randomNum));
     alreadyUsed.add(randomNum);
    return randomNum;
  public void updateCount() {
     counter = counter + 1;
    totalCleared = totalCleared +1;
     system.debug('counter counter '+counter );
}
Game.vfp
<apex:page controller="Game" sidebar="false" showHeader="false" id="page1">
<apex:form id="form1">
<style>
  body{
  margin-top:50px;
h1 {
  font-size:20px;
.grid-cell {
  width: 50px;
  height: 50px;
  border-radius: 3px;
  text-align:center;
  text-color:red;
  background: #FF7849;
  color:white;
  font-weight:bold;
  font-size:35px;
}
</style>
<script>
var startTimer;
function fun(rowIndex,columnIndex) {
  var myTable = document.getElementById('NumberTable');
  var previousValue = document.getElementById('page1:form1:displayCounter').value;
  var currentValue = myTable.rows[rowIndex].cells[columnIndex].innerHTML;
  if(currentValue == 1) {
    startTime();
  if(currentValue == +previousValue +1) {
     myTable.rows[rowIndex].cells[columnIndex].innerHTML = ";
    var totalClear = document.getElementById('page1:form1:displayCounter1').value;
```

```
if(totalClear == 25) {
     var sec = document.getElementById("displayTime").innerHTML;
     document.getElementById("displayTime").innerHTML = "Great .. You cleared all
the numbers in "+sec+". Refresh the Browser Url to start new Game";
     stopTime();
   }
   updateCounter();
  }
}
function stopTime() {
 clearInterval(startTimer);
function startTime() {
 var \sec = 0:
 startTimer = setInterval(
 function() {
   sec = sec + 1;
   document.getElementById("displayTime").innerHTML = sec + " Seconds!!!";
  }, 1000);
</script>
<body>
 <center>
\langle h1 \rangle
 <b style="color:red; ">Game Instructions : </b>Touch all the numbers from 1 to 25 in
Sequence to empty this Grid
The Counter will get started as soon as you start the game. Try to finish as early as possible.
</h1>
 <h1>
 <apex:variable var="rowIndex" value="{!0}"/>
<apex:repeat value="{!numberList}" var="rowNums">
<apex:variable var="columnIndex" value="{!0}"/>
 <apex:repeat value="{!rowNums}" var="num">
```

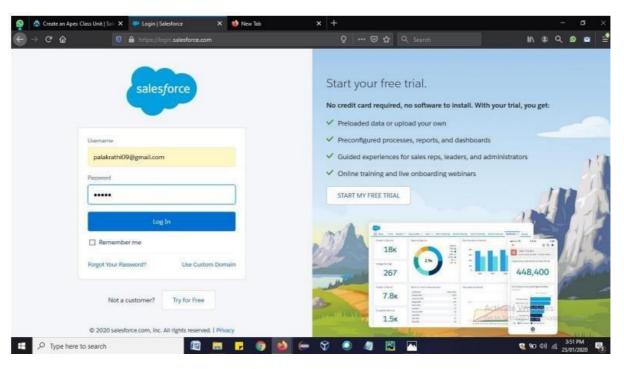
```
 {!num}
    <apex:variable var="columnIndex" value="{!columnIndex+1}"/>
  </apex:repeat><apex:variable var="rowIndex" value="{!rowIndex+1}"/>
</apex:repeat>
</center>
<apex:inputtext value="{!counter}" id="displayCounter" style="display:none;"/>
<apex:inputtext value="{!totalCleared}" id="displayCounter1" style="display:none;"/>
</body>
<button onclick="window.location.reload()" id="startGame" style="display:none;">Start
New Game</button>
<apex:actionFunction action="{!updateCount}" name="updateCounter"</pre>
rerender="displayCounter,displayCounter1">
</apex:actionFunction>
</apex:form>
</apex:page>
```



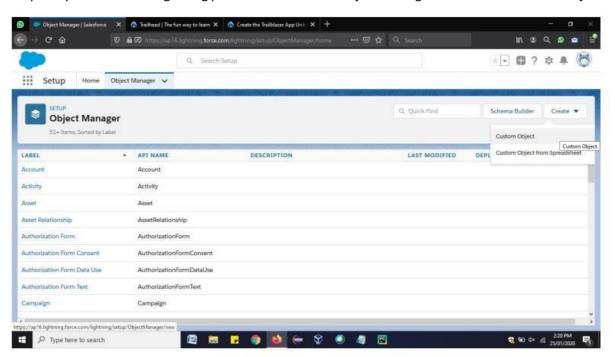


Implementation:

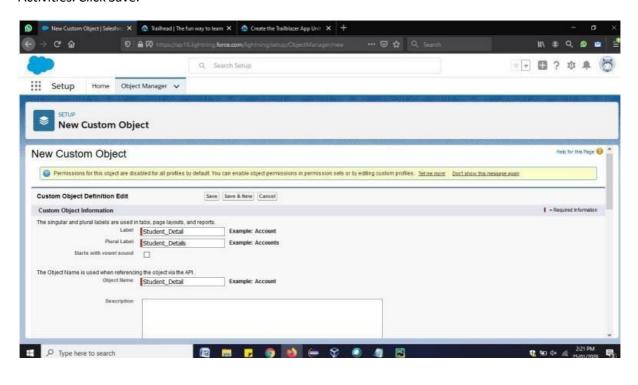
Step 1: Log into Salesforce Developer account.

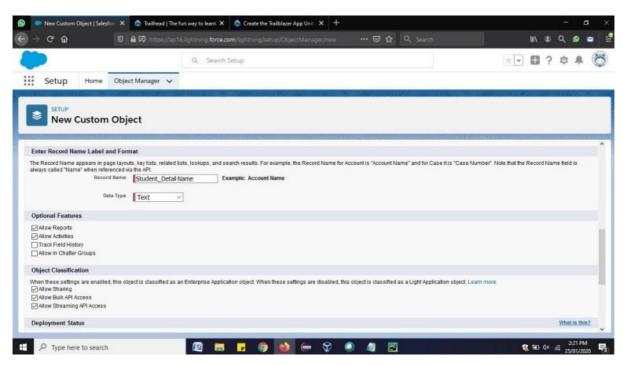


Step 2: Open Salesforce Lightning platform and click on Object Manager => Create => Custom Object.

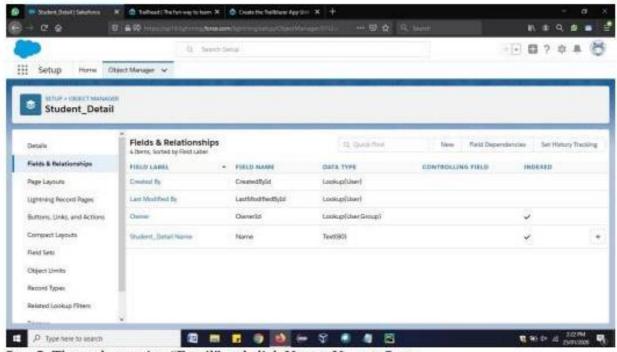


Step 3: Fill in the required fields and under Optional Features, select Allow Reports and Allow Activities. Click Save.

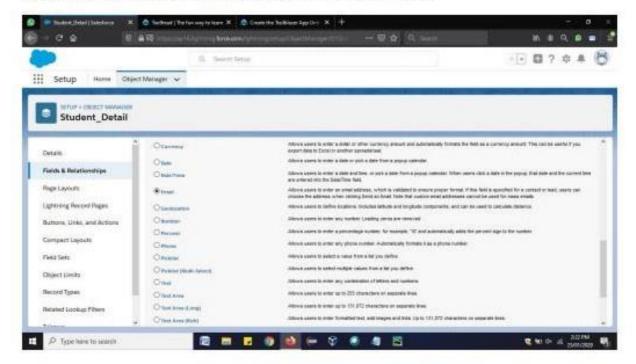




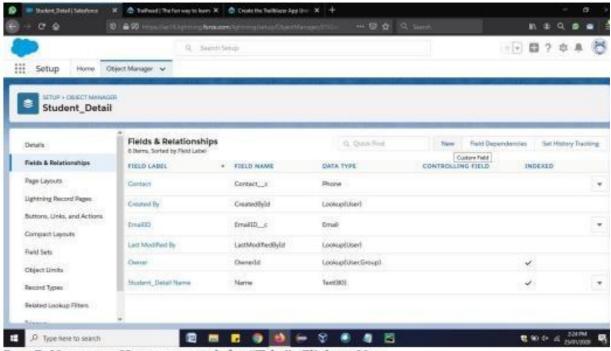
Step 4: Now, Click on Fields & Relations => New.



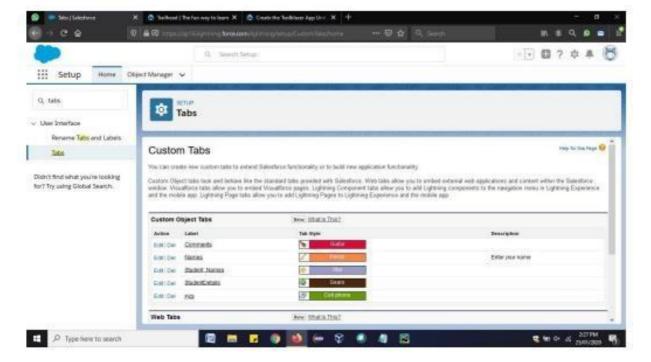
Step 5: Then select option "Email" and click Next-> Next -> Save.



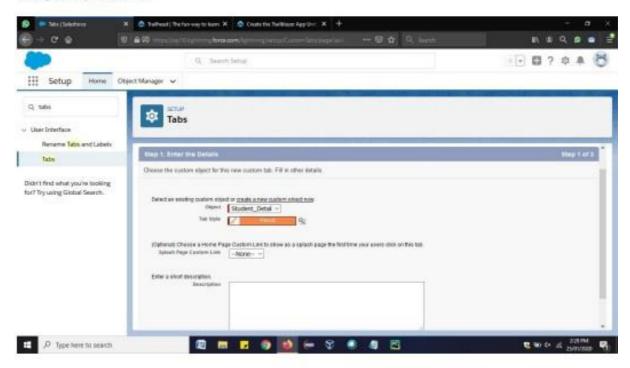
Step 6: Similarly. Repeat steps 4 and 5 to add more fields like Phone, Date of Birth. This is how the custom object will have the various fields.



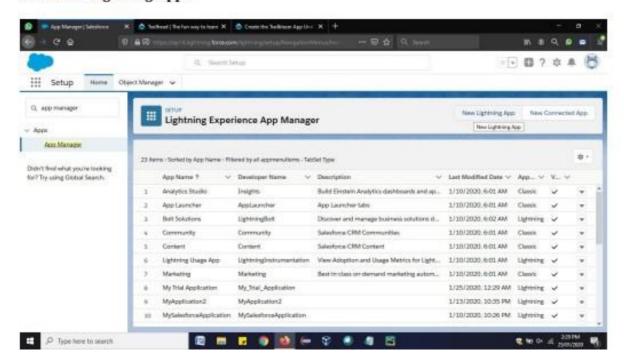
Step 7: Now go to Home => search for "Tabs". Click on New.



Step 8: Enter the Object name and select any icon for tab style. Leave all defaults as it is. Click Next, Next, and Save.



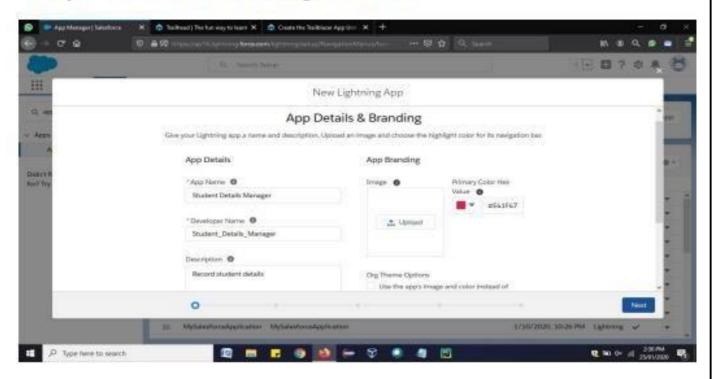
Step 9: In Setup, click Home. Enter "App Manager" in Quick Find and select App Manager. Click New Lightning App.



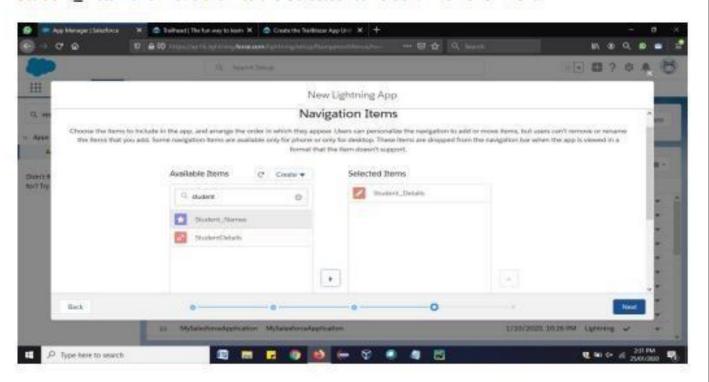
Step 10: Define the new Lightning app as follows:

App Name: Student Details Manager

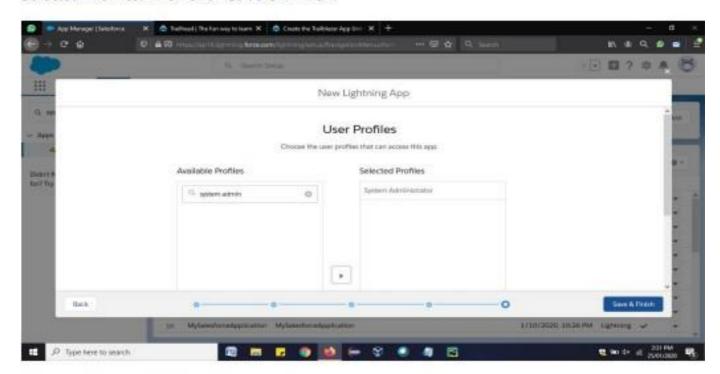
Developer Name: Student_Details_Manager. Click Next.



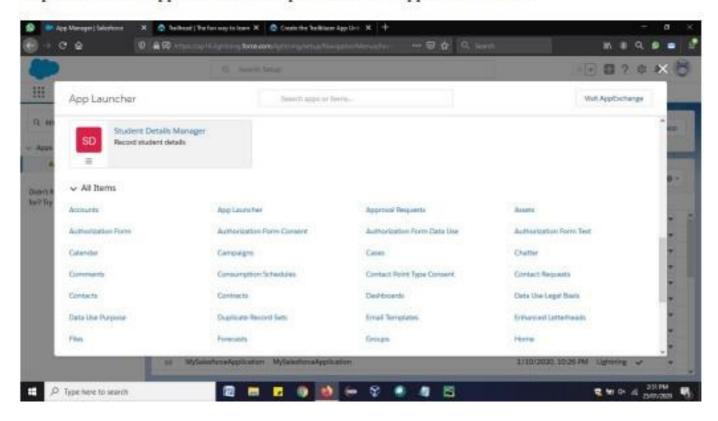
Step 11: On the App Options screen, leave the defaults as is and click **Next**. On the Utility Items screen, leave the defaults as is and click **Next**. On the Navigation Items screen, select **Student_Detail** and move them to the Selected Items box. Then click **Next**.

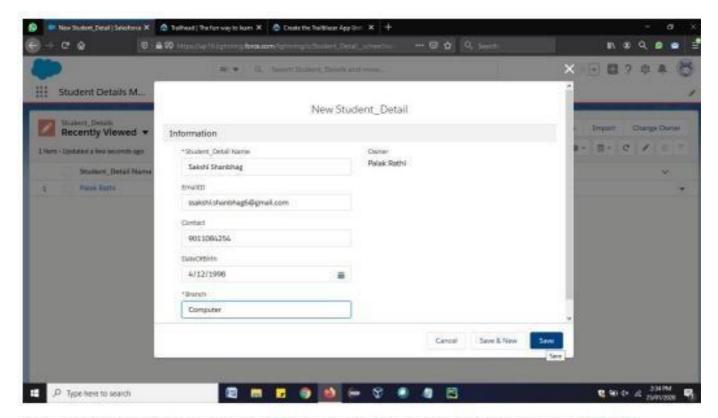


Step 12: On the Assign to User Profiles screen, select **System Administrator** and move it to Selected Profiles. Then click **Save & Finish**.

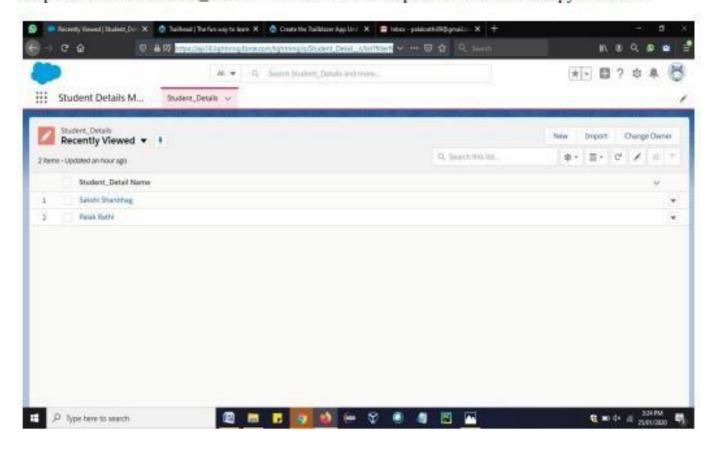


Step 13: Click on App launcher and Open the custom application created.





Step 14: Click on Student_Details => New => fill the specified details and copy the URL.



Step 15: Open Google Chrome new Tab => More Tools => Developer Tools and then paste the URL of the application, copied in the previous step.



