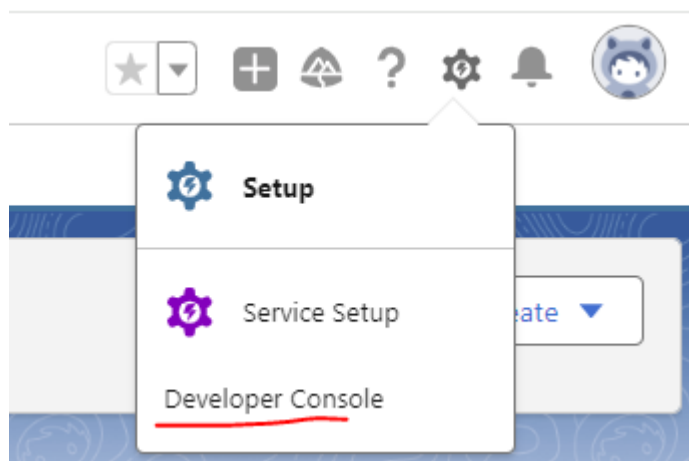


## Task 5: Creating an Application in SalesForce.com using Apex programming Language.

Login To Salesforce <https://login.salesforce.com>

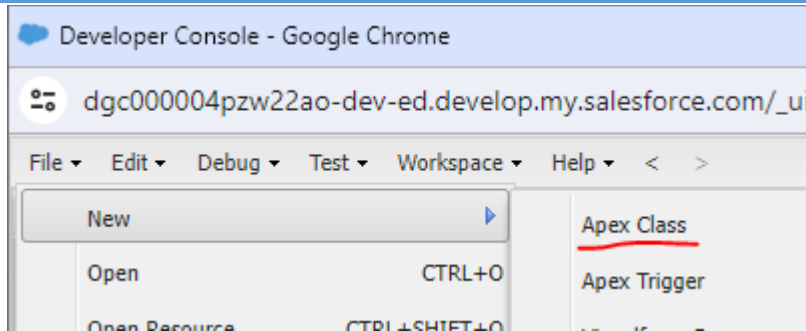
Click on Developer Console



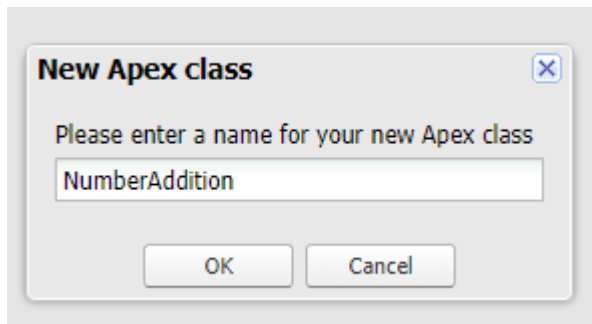
Example 1:: Addition Of Number

File >> New >> Apex Class

# Recent Trends in Cloud Computing



Please enter a name for your new Apex class NumberAddition



```
public class NumberAddition {  
    public static Integer addNumbers(Integer num1, Integer num2) {  
        Integer sum = num1 + num2;  
        System.debug('Sum calculation: ' + num1 + ' + ' + num2 + ' = ' + sum);  
        return sum;  
    }  
    public static void main(String[] args) {  
        System.debug('Starting the main method.');        // Example values for num1 and num2  
        Integer number1 = 5;  
        Integer number2 = 10;  
        Integer result = addNumbers(number1, number2);  
        System.debug('The sum of ' + number1 + ' and ' + number2 + ' is: ' + result);  
        System.debug('Exiting the main method.');    }  
}
```

To Execute << Click on Debug >> Open Execute Anonymous Window

Enter below Contents 1) Tick Open Log 2) Click on Execute

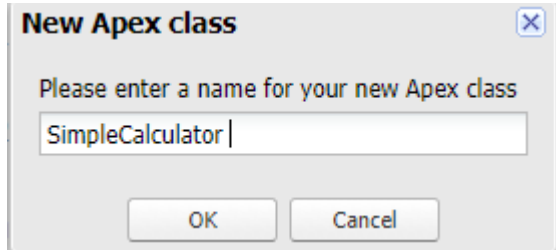
```
NumberAddition.addNumbers(8, 15);
```

## Recent Trends in Cloud Computing

## New Window will appear Select Debug Only Option

[illegible]

## Example 2: SimpleCalculator >> Create new Class file with SimpleCalculator



```
public class SimpleCalculator {  
    public static Integer add(Integer num1, Integer num2) {  
        return num1 + num2;  
    }  
  
    public static Integer subtract(Integer num1, Integer num2) {  
        return num1 - num2;  
    }  
  
    public static Integer multiply(Integer num1, Integer num2) {  
        return num1 * num2;  
    }  
  
    public static Decimal divide(Integer num1, Integer num2) {  
        if (num2 != 0) {  
            return num1 / num2;  
        } else {  
            // Handle division by zero  
            System.debug('Error: Division by zero.');            return null;  
        }  
    }  
}
```

# Recent Trends in Cloud Computing

}

Apex block

```
Integer operand1 = 10;
```

```
Integer operand2 = 5;
```

```
Integer sum = SimpleCalculator.add(operand1, operand2);
```

```
Integer difference = SimpleCalculator.subtract(operand1, operand2);
```

```
Integer product = SimpleCalculator.multiply(operand1, operand2);
```

```
Decimal quotient = SimpleCalculator.divide(operand1, operand2);
```

```
System.debug('Sum: ' + sum);
```

```
System.debug('Difference: ' + difference);
```

```
System.debug('Product: ' + product);
```

```
System.debug('Quotient: ' + quotient);
```

Execution Log		
Timestamp	Event	Details
16:34:02:004	USER_DEBUG	[9] DEBUG Sum: 15
16:34:02:004	USER_DEBUG	[10] DEBUG Difference: 5
16:34:02:004	USER_DEBUG	[11] DEBUG Product: 50
16:34:02:004	USER_DEBUG	[12] DEBUG Quotient: 2

☐ This Frame ☐ Executable ☒ Debug Only ☐ Filter [Click here to filter the log](#)

### Task 6: Design and develop custom Application (Mini Project) using Salesforce Cloud.

#### Collage Management App Using Salesforce Cloud

##### Student

Name  
student ID  
Age  
Birth\_Date  
course

##### Staff

Name  
Staff\_ID  
Age  
BirthDate  
Subject

##### Records

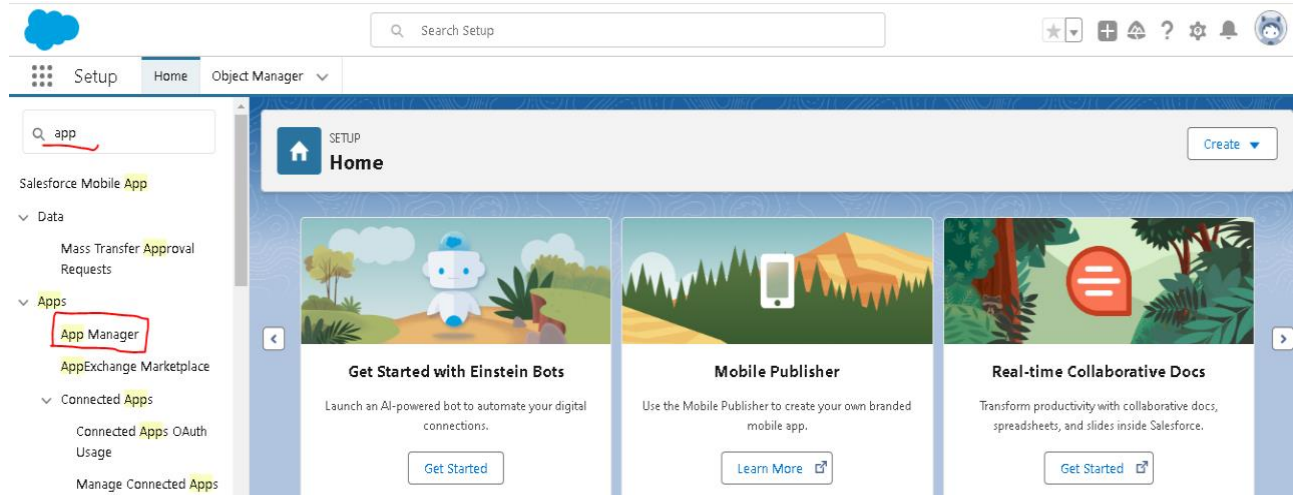
Fee  
Grades

# Recent Trends in Cloud Computing

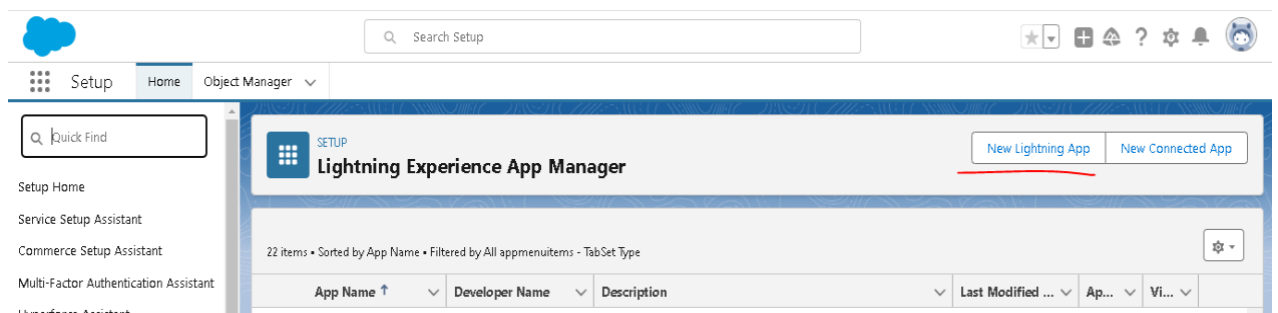
## Steps-1

Login to <https://login.salesforce.com>

## Search for App Manager



## 1. Click on New Lightning App



## 2. Name to your Application

New Lightning App

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

\* App Name ⓘ  
Collage Management App

\* Developer Name ⓘ  
Collage\_Management\_App

Description ⓘ  
Enter a description...

App Branding

Image ⓘ  
Upload

Primary Color Hex Value ⓘ  
#0070D2

Org Theme Options  
☐ Use the app's image and color instead of the

Next

# Recent Trends in Cloud Computing

## 3. Keep All app Option remain unchanged.

### New Lightning App

#### App Options

##### Navigation and Form Factor ⓘ

###### \*Navigation Style

- ☒ Standard navigation
- ☐ Console navigation

###### \*Supported Form Factors

- ☒ Desktop and phone
- ☐ Desktop
- ☐ Phone

##### Setup and Personalization ⓘ

###### Setup Experience

- ☒ Setup (full set of Setup options)
- ☐ Service Setup

###### App Personalization Settings

- ☐ Disable end user personalization of nav items in this app
- ☐ Disable temporary tabs for items outside of this app
- ☐ Use Omni-Channel sidebar

Back

Next

## 4. Add Utility Items Rich Text

### New Lightning App

Lightning Experience on a desktop.

Search...

- List View
- Macros
- My Appointments
- Notes
- Open CTI Softphone
- Quip Associated Documents
- Quip Notifications
- Recent Items
- Report Chart
- Rich Text
- To Do List
- Visualforce

Rich Text  
Display HTML-formatted rich text.  
Supported form factors: desktop and phone

the utility bar for this app, add a utility item.

Back

Next

### New Lightning App

rollback X

Panel Width ⓘ

340

Panel Height ⓘ

480

☐ Start automatically ⓘ

#### Component Properties

Salesforce Sans 12

B I U S

Link

This is My First Application Project

Back

Next



# Recent Trends in Cloud Computing

## 5. Add Utility Items Recent Items

New Lightning App

Utility Bar Alignment ⓘ Default

Add Utility Item

Search...

- Notes
- Open CTI Softphone
- Quip Associated Documents
- Quip Notifications
- Recent Items
- Report Chart
- Rich Text
- To Do List
- Visualforce

Custom (0)  
No components available.

PROPERTIES  
Recent Items

Utility Item Properties

\*Label  
Recent Items

Icon  
⚡ fallback ×

Panel Width  
340

Back

Next

mininginstrumentation view Adoption and Usage Metrics for Lightning Experience 06/03/2024, 1:20 pm Lightning ✓

Marketing Track sales and marketing efforts with CRM objects. 06/03/2024, 1:20 pm Classic ✓

## 6. Click Next

## 7. Select Callender In navigation Item

New Lightning App

Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items

Calendar

Voice Calls

Selected Items

Back

Next

# Recent Trends in Cloud Computing

## 8. Select System Administrator as Profile

New Lightning App

### User Profiles

Choose the user profiles that can access this app.

Available Profiles

Salesforce API Only System Integrations

System Administrator

Selected Profiles

Back

Save & Finish

## 9. Save & Finish

New Lightning App

### User Profiles

Choose the user profiles that can access this app.

Available Profiles

Salesforce API Only System Integrations

Selected Profiles

System Administrator

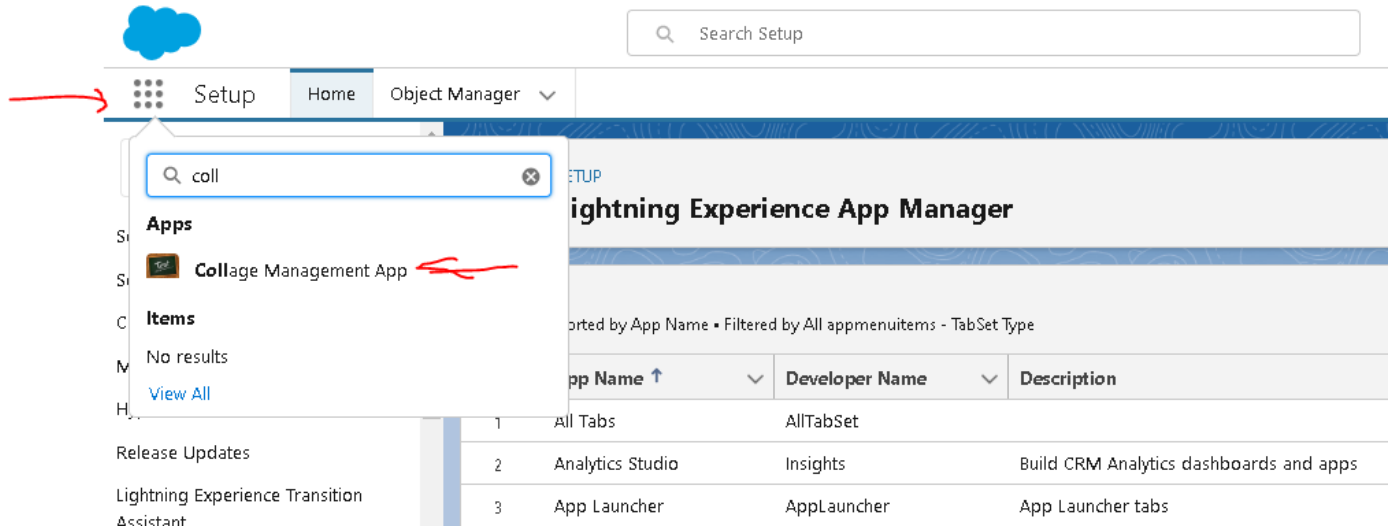
Back

Save & Finish

# Recent Trends in Cloud Computing

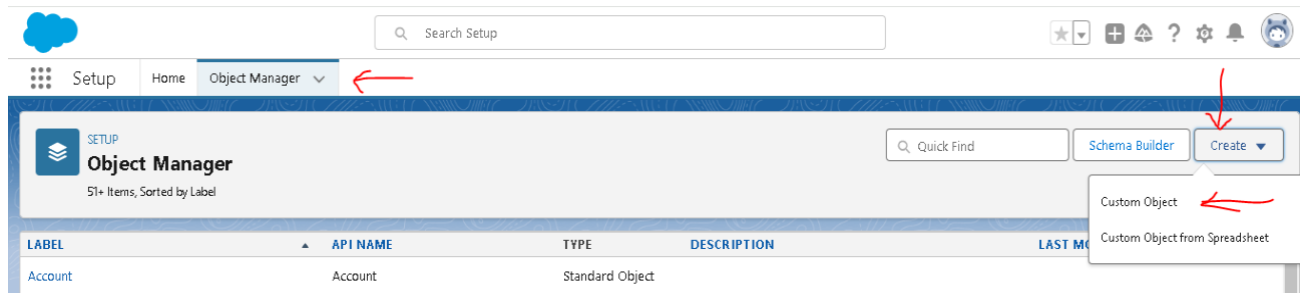
## Step2

**Go to App Launcher and Search Collage Management app and open in New Tab by clicking.**



**Now Need to add Objects**

**Add three Custom Objects (Student, Staff, Records)**



# Recent Trends in Cloud Computing

Setup Home Object Manager



SETUP

## New Custom Object

### Custom Object Definition Edit

Save

Save & New

Cancel

#### Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label

Student

Example: Account

Plural Label

Students

Example: Accounts

Starts with vowel sound

☐

The Object Name is used when referencing the object via the API.

Object Name

Student

Example: Account

Description

Context-Sensitive Help Setting

☒ Open the standard Salesforce.com Help & Training window

☐ Open a window using a Visualforce page

Content Name

--None--

- ☒ Allow Reports
- ☒ Allow Activities
- ☒ Track Field History
- ☐ Allow in Chatter Groups
- ☐ Enable Licensing [i](#)

#### Object Classification

When these settings are enabled, this object is classified as an Enterprise Application object. When these settings are disabled, this object is classified as a Standard object.

- ☒ Allow Sharing
- ☒ Allow Bulk API Access
- ☒ Allow Streaming API Access

#### Deployment Status

- ☐ In Development
- ☒ Deployed

#### Search Status

When this setting is enabled, your users can find records of this object type when they search. [Learn more.](#)

- ☒ Allow Search

Click Save and New and add Staff and Record with same way

# Recent Trends in Cloud Computing

## Step3

### Add Tab for Student, Staff and Records using below Steps

The screenshot shows the Salesforce Setup Home page. The left sidebar contains a search bar with 'tab' entered. Below the search bar, the navigation menu is expanded, showing 'Feature Settings' > 'Analytics' > 'Tableau' > 'Tableau Embedding'. Under 'User Interface', the 'Loaded Console Tab Limit' and 'Rename Tabs and Labels' options are visible. The 'Tabs' option is highlighted with a red box. The main content area shows the 'Home' page with a search bar and a list of featured content: 'Get Started with Einstein Bots' and 'Mobile Publi'. Below this, the 'Most Recently Used' section is visible.

1

2

3

4

5

# Recent Trends in Cloud Computing



## SETUP Tabs

Choose the custom object for this new custom tab. Fill in other details.

Select an existing custom object or create a new custom object now.

Object **Student**

Tab Style



People



(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link **--None--**

Enter a short description.

Description

Students Details

Next



## SETUP Tabs

### New Custom Object Tab

[Help for this Page](#)

#### Step 2. Add to Profiles

Step 2 of 3

Choose the user profiles for which the new custom tab will be available. You may also examine or alter the visibility of tabs from the detail and edit pages of each profile.

- ☒ Apply one tab visibility to all profiles **Default On**
- ☐ Apply a different tab visibility for each profile

Profile	Tab Visibility
Analytics Cloud Integration User	Default On
Analytics Cloud Security User	Default On
Authenticated Website	Default On
Authenticated Website	Default On
B2B Reordering Portal Buyer Profile	Default On
Contract Manager	Default On

# Recent Trends in Cloud Computing



## Step 3. Add to Custom Apps

Step 3 of 3

Choose the custom apps for which the new custom tab will be available. You may also examine or alter the visibility of tabs from the detail and edit pages of each Custom App.

Custom App	<input checked="" type="checkbox"/> Include Tab
Platform (standard__Platform)	<input checked="" type="checkbox"/>
Sales (standard__Sales)	<input checked="" type="checkbox"/>
Service (standard__Service)	<input checked="" type="checkbox"/>
Marketing CRM Classic (standard__Marketing)	<input checked="" type="checkbox"/>
Sample Console (standard__ServiceConsole)	<input checked="" type="checkbox"/>
High Volume Customer Portal User	<input checked="" type="checkbox"/>
Authenticated Website User	<input checked="" type="checkbox"/>
App Launcher (standard__AppLauncher)	<input checked="" type="checkbox"/>
Community (standard__Community)	<input checked="" type="checkbox"/>
Site.com (standard__Sites)	<input checked="" type="checkbox"/>

**Click on the Save**

**Add Staff and Records in same way.**



Choose the custom object for this new custom tab. Fill in other details.

Select an existing custom object or [create a new custom object now](#).

Object

Tab Style  People 

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link

Enter a short description.

Description

Next

# Recent Trends in Cloud Computing



Choose the custom object for this new custom tab. Fill in other details.

Select an existing custom object or [create a new custom object now](#).

Object **Record** ▼

Tab Style **Computer**

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link **--None--** ▼

Enter a short description.

Description

## Refresh Collage Management Tab Browser

★

+

🔍

?

⚙️

🔔

👤

Collage Managem...

Students ▼

Staffs ▼

Records ▼

Calendar ▼

Students

Recently Viewed ▼

📌

New

Import

Change Owner

🔍 Search this list...

⚙️

📄

🔄

✏️

🗑️

▼

1 item • Updated a few seconds ago

	<input type="checkbox"/> Student Name	
1	<input type="checkbox"/> Scott	▼



# Recent Trends in Cloud Computing

## Step 4

Add Fields and Relationship >> Go to Object Manager >>

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The 'Object Manager' tab is selected. Below the navigation bar, there is a search bar and a 'Quick Find' button. The main content area displays a list of objects. The 'Student' object is highlighted, and a context menu is open, showing 'Edit' and 'Delete' options. A red arrow points to the 'Edit' option.

Object Label	Object Name	Object Type	Last Modified By	Created By
Shipping Item	ShippingItem	Standard Object		
Skill Requirement	SkillRequirement	Standard Object		
Social Persona	SocialPersona	Standard Object		
Staff	Staff_c	Custom Object	13/03/2024	✓
Store	WebStore	Standard Object		
Store Buyer Group	WebStoreBuyerGroup	Standard Object		
Store Catalog	WebStoreCatalog	Standard Object		
Student	Student_c	Custom Object	13/03/2024	✓
Task	Task	Standard Object		
Time Slot	TimeSlot	Standard Object		

The screenshot shows the 'Fields & Relationships' section for the 'Student' object. The left sidebar contains a list of options: 'Details', 'Fields & Relationships', 'Page Layouts', 'Lightning Record Pages', 'Buttons, Links, and Actions', 'Compact Layouts', 'Field Sets', 'Object Limits', and 'Record Types'. The 'Fields & Relationships' option is selected. The main content area displays a table of fields. The 'New' button is highlighted in the top right corner of the section.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Student Name	Name	Text(80)		✓

# Recent Trends in Cloud Computing


Select the Text for Student Name ,

Number for StudentID,

Number for Age,

Date for birthdate,

PickUp List for Course

<input type="radio"/> Email	Allows users to enter an email address, which is validated to ensure proper format. If this field is specified for a contact or lead, users can address when clicking Send an Email. Note that custom email addresses cannot be used for mass emails.
<input type="radio"/> Geolocation	Allows users to define locations. Includes latitude and longitude components, and can be used to calculate distance.
<input type="radio"/> Number	Allows users to enter any number. Leading zeros are removed.
<input type="radio"/> Percent	Allows users to enter a percentage number, for example, '10' and automatically adds the percent sign to the number.
<input type="radio"/> Phone	Allows users to enter any phone number. Automatically formats it as a phone number.
<input type="radio"/> Picklist	Allows users to select a value from a list you define.
<input type="radio"/> Picklist (Multi-Select)	Allows users to select multiple values from a list you define.
<input checked="" type="radio"/> Text	Allows users to enter any combination of letters and numbers.
<input type="radio"/> Text Area	Allows users to enter up to 255 characters on separate lines.
<input type="radio"/> Text Area (Long)	Allows users to enter up to 131,072 characters on separate lines.
<input type="radio"/> Text Area (Rich)	Allows users to enter formatted text, add images and links. Up to 131,072 characters on separate lines.
<input type="radio"/> Text (Encrypted) 	Allows users to enter any combination of letters and numbers and store them in encrypted form.
<input type="radio"/> Time	Allows users to enter a local time. For example, "2:40 PM", "14:40", "14:40:00", and "14:40:50.600" are all valid times for this field.
<input type="radio"/> URL	Allows users to enter any valid website address. When users click on the field, the URL will open in a separate browser window.

SETUP > OBJECT MANAGER

Student

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Step 2. Enter the details

Step 2 of 4

Previous

Next

Cancel

Field Label

Name

Please enter the maximum length for a text field below.

Length

30

Field Name

Name

Description

Student Name

Help Text

Required

☒ Always require a value in this field in order to save a record

Unique

☐ Do not allow duplicate values

☒ Treat "ABC" and "abc" as duplicate values (case insensitive)

☐ Treat "ABC" and "abc" as different values (case sensitive)

External ID

☐ Set this field as the unique record identifier from an external system

# Recent Trends in Cloud Computing

The screenshot shows the 'New Custom Field' wizard in Salesforce Setup, specifically Step 3: Establish field-level security. The left sidebar shows the navigation menu with 'Fields & Relationships' selected. The main content area shows the field details: Field Label 'Name', Data Type 'Text', Field Name 'Name', and Description 'Student Name'. Below this is a table for selecting profiles to grant edit access to. The table has columns for 'Field-Level Security for Profile', 'Visible', and 'Read-Only'. The profiles listed are Analytics Cloud Integration User, Analytics Cloud Security User, Authenticated Website, and B2B Recurring Portal Buggy Profile. All 'Visible' checkboxes are checked, and all 'Read-Only' checkboxes are unchecked. At the bottom right, there are buttons for 'Previous', 'Next', and 'Cancel'. A red line is drawn under the 'Next' button.

Field-Level Security for Profile	Visible	Read-Only
Analytics Cloud Integration User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Analytics Cloud Security User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Authenticated Website	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B2B Recurring Portal Buggy Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Save**

The screenshot shows the 'New Custom Field' wizard in Salesforce Setup, specifically Step 4: Add to page layouts. The left sidebar shows the navigation menu with 'Fields & Relationships' selected. The main content area shows the field details: Field Label 'Name', Data Type 'Text', Field Name 'Name', and Description 'Student Name'. Below this is a section for selecting page layouts to include this field. The text says: 'Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout. To change the location of this field on the page, you will need to customize the page layout.' There is a table with columns 'Add Field' and 'Page Layout Name'. The first row has a checked checkbox and the text 'Student Layout'. At the bottom, there is a note: 'When finished, click Save & New to create more custom fields, or click Save if you are done.' At the bottom right, there are buttons for 'Previous', 'Save & New', 'Save', and 'Cancel'.

Add Field	Page Layout Name
<input checked="" type="checkbox"/>	Student Layout

**Add for Staff and Records As well.**

**Staff**

**Name ( Text )**

**Staff ID ( Number )**

**Age ( Number )**

**BirthDate ( Date )**

**Subject ( Pickup List )**

**Records**

**Fee ( Number )**

**Grades ( Pickup List )**

**For Pickup List**

# Recent Trends in Cloud Computing

1

The screenshot shows the Salesforce Setup interface for the 'Student' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Step 2. Enter the details'. It includes a 'Field Label' field with the value 'course', a 'Values' section with two radio buttons ('Use global picklist value set' and 'Enter values, with each value separated by a new line'), a text area containing 'Computer Engineering' and 'Information Technology', and three checked checkboxes: 'Display values alphabetically, not in the order entered', 'Use first value as default value', and 'Restrict picklist to the values defined in the value set'.

2

3

4

5 **Step5 Go to Collage Nanomagnet App and add records.**

6

7

8

The screenshot shows the 'Collage Management' app interface. A modal window titled 'Information' is open, displaying a form to add a new student record. The form includes fields for 'Student Name' (marked with a red asterisk and a red border), 'Name', 'StudentID', 'Age', 'Birth\_Date', and 'course' (a dropdown menu with 'Computer Engineering' selected). The 'Owner' field shows 'Santosh Ugale'. At the bottom of the modal are buttons for 'Cancel', 'Save & New', and 'Save'. The background shows the app's main interface with a search bar and a list of students.


5

6

7








8

# Recent Trends in Cloud Computing




Collage Manageme...

Search...



Students ▾ Staffs ▾ Records ▾ Calendar ▾

 Student  
**Santosh ugale**

New Contact Edit New Opportunity ▾

Related

Details

Student Name  
Santosh ugale

Name  
Santosh Ugale

StudentID  
1

Age  
20

Birth\_Date  
26/02/2024





course  
Computer Engineering

Created By  
[User]

Owner  
Santosh Ugale

Last Modified By  
[User]

Activity



Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

No activities to show.  
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

Recent Items Rich Text