



- Department of computer science engineering -

# Object-Oriented **Programming**

## Case Study

### CS: 305

: Basic Email System in C++ :

Subtitles:

Simulating an Email System with Inbox, Outbox, and Message Sending Functionality.



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# CONTENT :-

- Summarize 1<sup>st</sup> ppt :
  - Explain need, Advantage & Disadvantage.
  - Studied exist system.
  - Studied Application.
- 2<sup>nd</sup> ppt:
  - Explain case study using Use-case diagram.
  - Explain case study using Class-object diagram.
  - Input-output flow of case study.



## **- Brief of 1<sup>st</sup> ppt -**

Email systems play a crucial role in modern communication, providing a quick and efficient means of exchanging messages electronically.

### **- Advantage of email system -**

The email system offers advantages such as:-Speed and Efficiency, Cost-Effective, Global reach, Documentation and Record Keeping.

### **- Disadvantage of email system -**

While the email system offers numerous advantages, it also has some disadvantages including:-Spam and Overload, Lack of Personal interaction, Security Concerns, Technical Issues.

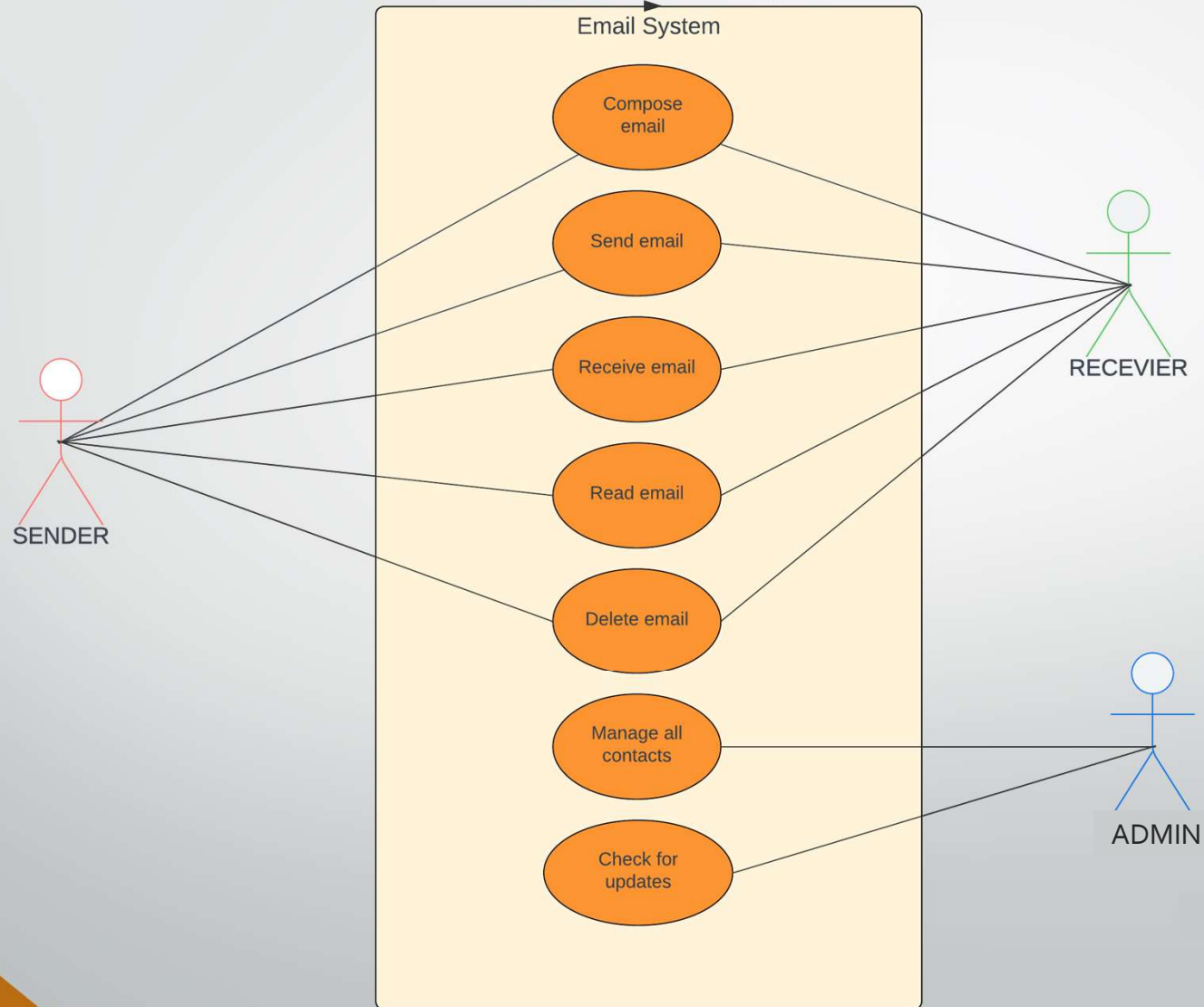
### **- Studied exist system -**

As of my last knowledge update in January 2022, several email systems exist, each with its unique features and characteristics. for example:-Gmail, Outlook, yahoo mail.

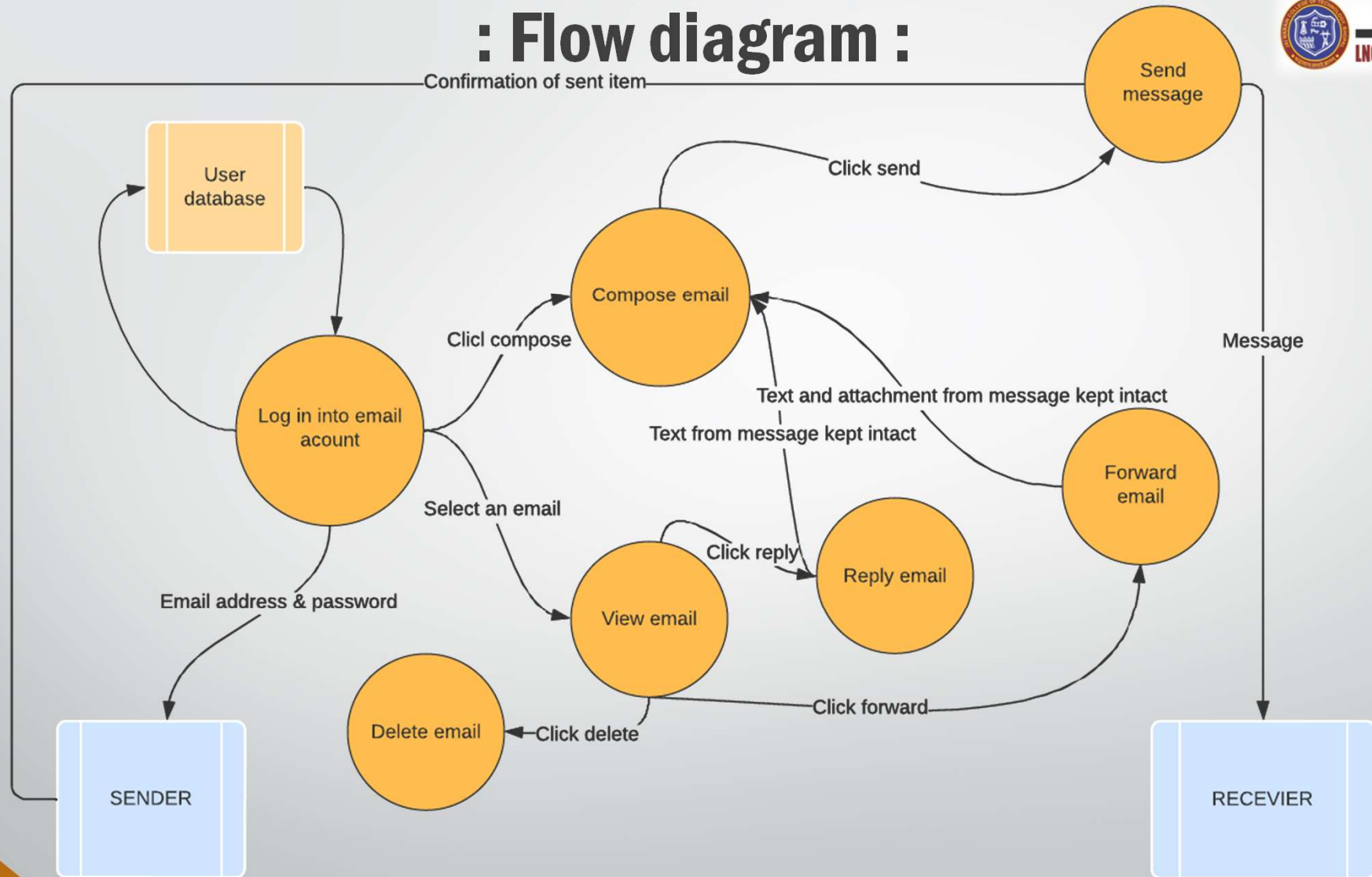
### **- Studied application -**

1.Studying an email application involves exploring the features, functionality, and usage of a specific email platform. Key aspects of such a study may include: **User Interface (UI), Features and Functionality, Security Measures, Compatibility, Storage and Archiving.**

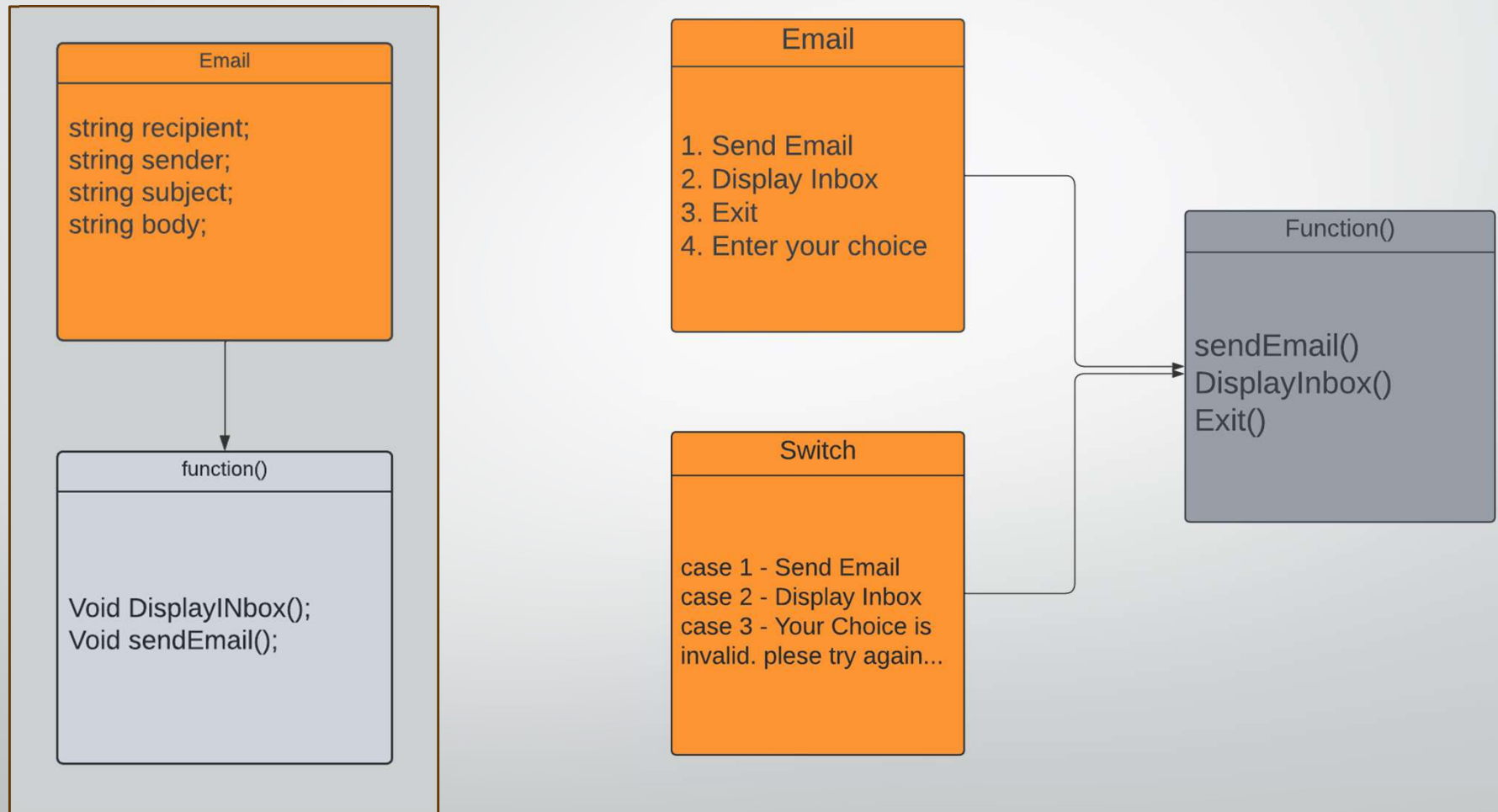
## : Use case diagram :



# : Flow diagram :



# : Class and object diagram :





## : Email system sample C++ :

### ➤ **Our login interface :-**

**Input** - First press 1 for login :

Then enter your details like :

>>Username & password

**Output** - Your account successfully logged in

```
1. Login
press 1 : 1
login :
Enter your username: cybercraft
Enter password : craft!@123
your account successfully logged in
```

## : Email system sample C++ :

➤ **Our screen will display like this :-**

There will be three options to choose:

1. First one was for sending email.
2. Second one for notify emails.

ex: “you have some message in inbox

>>Check it out”

3. Third one is for exit.

```
PS F:\> cd 'f:\case-study\output'
PS F:\case-study\output> & .\'emial-using-oopm.exe'
1. Send Email
2. Display Inbox
3. Exit
Enter your choice: █
```



## : Email system sample C++ :

### ➤ Our input and output for first option :-

#### **Input :**

- Like for example we choose option 1<sup>st</sup> :-

> Send email : “Now we have to fill some details”

Like: Sender’s email, Recipient’s email,  
Subject and Body.

**Output :** Successfully send.

```
send Email
Enter sender's email address: cybercraft@gmail.com
Enter recipient's email address: shivamsahu@gmail.com
Enter email subject: for-texting
Enter email body: ppt2
Your E-mail has been sent successfully .....!.
1. Send Email
2. Display Inbox
3. Exit
Enter your choice: █
```

## : Email code sample C++ :

```
F: > case-study > cyber_craft.cpp > main()
1  #include <iostream>
2  using namespace std;
3
4  class Create
5  {
6      // for create mail
7      string username;
8      // string name;
9      string password;
10     // for send mail
11     string recipient;
12     string sender;
13     string subject;
14     string body;
15
16 public:
17     // constructor
18     Create()
19     {
20         username = 'name';
21         password = 'password';
22     }
23
24 public:
25     void login_page()
26     {
27         cout << "Enter your username: ";
28         cin >> username;
29         cout << "Enter password : ";
30         cin >> password;
31
32         cout << "your account successfully logged in \n";
33     }
34
35 };
36 class Email : public Create
37 {
```

## : Email code sample C++ :

```
37 {
38 private:
39     string recipient;
40     string sender;
41     string subject;
42     string body;
43
44 public:
45     Email()
46     {
47         recipient = "recipt";
48         sender = 'sendMasaage';
49         subject = "subject";
50         body = "body";
51     }
52
53     void display()
54     {
55         int choice;
56         cout << "1. Send Email\n";
57         cout << "2. Display Inbox\n";
58         cout << "3. Exit\n";
59         cout << "Enter your choice: ";
60
61     }
62
63     void sendEmail()
64     {
65         cout << "Enter sender's email address: ";
66         cin >> sender;
67         cout << "Enter recipient's email address: ";
68         cin >> recipient;
69         cout << "Enter email subject: ";
70         cin >> subject;
71         cout << "Enter email body: ";
72         cin >> body;
73     }
```

## : Email code sample C++ :

```
74 | cout << "Your E-mail has been sent successfully .....!\n";
75 | }
76 |
77 | void DisplayInbox()
78 | {
79 | | cout << "you have some message in inbox..... Check it out ..\n.";
80 | }
81 | void Exit()
82 | {
83 | | cout << "Exit...\n";
84 | }
85 | };
86 | int main()
87 | {
88 | | char login;
89 | | Create create;
90 | | Email email;
91 | | char choice;
92 | | // do
93 | | // {
94 | | /* code */
95 | | cout << "1. Login\n";
96 | |
97 | | // cout<<"2. password\n";
98 | | cout << "press 1 : ";
99 | | cin >> login;
100 | |
101 | |
102 | | switch (login)
103 | | {
104 | | | case '1':
105 | | | | cout << " login : \n";
106 | | | | create.login_page();
107 | | | | email.display();
108 | | | | break;
109 | | | // case '2': cout<<" Enter your password";
110 | | | // break;
```

## : Email code sample C++ :

```

145
146 while (choice != 3)
147
148 // {
149 // cout << "Thankyour for visiting our site .....";
150 // }
151
152 return 0;
153 }
154

```

```

111
112 // default: cout<<"plese choose valid number\n";
113 // break;
114 }
115 while (login != 1)
116 {
117 cout << "plese enter valid num\n";
118 break;
119 break;
120 };
121
122 // do{
123 // cout << "1. Send Email\n";
124 // cout << "2. Display Inbox\n";
125 // cout << "3. Exit\n";
126 // cout << "Enter your choice: ";
127 ||| cin>>choice;
128
129 switch (choice)
130 {
131 case '1':
132 cout << "Send Email\n";
133 email.sendEmail();
134 break;
135 case '2':
136 cout << "Display Inbox\n";
137 email.DisplayInbox();
138 break;
139 break;
140
141 default:
142 cout << "Your Choice is invalid ... Plese try again..";
143 break;
144
145
146 while (choice != 3)
147

```

# THANK YOU

By:-

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