

# Assignment 3

Each team has a topic along with a description. Choose one of the design patterns below;

- Chain of Responsibility
- Command
- Iterator
- Mediator
- Memento
- Observer
- State
- Strategy
- Template Method
- Visitor

You are not required to develop the project (for example, if the project is about to create an Android app, then it does not mean that you have to create an Android project. It means you should take into account the aspects of mobile development when creating your classes). It is about implementing the design pattern within the context of the project. You may choose any feature (functionality) of your project. If you think the description does not contain a feature to implement the design pattern, you are free to add a feature to the project within the context of the topic.

## **Your work should contain the followings;**

1. UML class diagram - (weight 35 %)
2. Code - (weight 50 %)
3. Report - (weight 15 %)

## **Steps**

1. Create a UML diagram (preferably in draw.io) for a given topic.
2. Implement the UML using Java.
3. Write a report describing steps 1, 2, and the reasons why the team chose the design pattern.

## Each team needs to submit a zipped folder containing the following;

1. UML class diagram in image or pdf format (if it is too big, then you can put a link to the UML diagram in your report).
2. A report in pdf format.
3. A zipped file containing the source code (written in JAVA).

## How can our team obtain a high grade?

### • UML

- Good class naming
- The part that is responsible for pattern application is **highlighted**
- Fields/methods are reflected in the diagram according to the project's implementation (no need to define many fields/methods, include only the necessary).
- Types should be consistent with: <https://www.uml-diagrams.org/data-type.html>
- Relationships between classes should also be defined (if there is an association, **name** it and include it). Example: <https://www.uml-diagrams.org/class.html>. If there is a relationship between different classes, indicate them in class field/method (for example, if class A has the instance of class B, then indicate class B as a field in class A).
- No classes 'hanging in the air'. All classes must be somehow associated with each other.

### • Implementation

- **Pure** Java (no frameworks, no libraries, no dependencies)
- Source code should be consistent with your UML diagram
- Code is not messy (<https://google.github.io/styleguide/javaguide.html>)
- README (provide the steps for executing your project)
- Ensure the methods and properties in the UML diagram are included in your code
- Code is documented where possible / where necessary

### • Report

- Shortly introduce the project context/task
- Clearly and shortly justifies why you chose the particular pattern
- Describes the job you have done in UML 1st and your source code 2nd
- Specifies the place of the pattern in your code
- Avoids grammar and spelling errors making it easy to understand and read
- Conveys meaning (when necessary with details) of what and why you are doing in your project
- Finally, describes the application of a particular pattern in a *crystal clear* way without relying on 'obviousness' or knowledge of patterns of the reviewer.

**The deadline 23:00, 28th of November, 2021**

Team#	Topic	Description
1	Hospital Management System	This is a software system that incorporates various factors needed for smooth working and management of a hospital. This hospital management system allows administrators to store and manage various products and related data. This includes the beds/normal accommodation/ICU accommodation as well as patient data. In case a new patient arrives, the administrator may check for bed availability in various hospital departments and allocate it accordingly as per the patient's need. The system also stores the patient data in a well defined manner. The patient details include his name, number, address and various health parameters. The software system has a front end to design an interactive GUI and an Sql DBMS to store its back end data. This back end data includes accommodation details and even related patient data for effectively managing a hospital.
2	Hotel Management Android Project	The regular hotel management system project entirely in an android app. This android application allows the hotel manager to handle all hotel activities in his android phone. Interactive gui and the ability to manage various hotel bookings and rooms from an android phone makes this hotel management system very flexible and convenient. The hotel is a very busy person and does not have the time to sit and manage the entire thing sitting at a single computer. This application gives him the power and flexibility to manage the entire system from a single android phone. Hotel management android project provides room booking, staff management and other necessary hotel management features to make it a complete portable hotel management solution.
3	iPad Restaurant Application	The iPad restaurant application aims at replacing the conventional menu system which is time consuming and old fashioned. Meal orders can be taken on an iPad, which will have the complete menu offered by the restaurant/hotel. Each menu item, under any of the above categories comes with a description of the item, ratings given by previous customers, a large image for better knowledge of the dish, and the cost of the item. The customer could also use the iPad provided by room service for reserving a table. The languages used for development in this project are Objective C for developing the application for iPad & for the server part PHP is being

		used as the language. It can be used in computer science as well as It projects for students.
4	Image Editor Project	<p>This is an image editor with various image editing functionality that allows you to crop, zoom, transform, adjust brightness and apply more such transformations over an image.</p> <p>This software system first allows the user to choose an image from your local computer. A menu bar on the top of the screen provides this functionality. The menu bar allows the user to open a new image and even save an edited image in your computer. The application also allows you to zoom in and out of the image. The user may apply various transformations over an image. The user may adjust image brightness and contrast. User can even apply gamma correction on the image. It also allows the user to crop and rotate the image as needed. Application also allows user to add reddish, bluish and greenish effect to the image. Finally user may save the edited file as needed.</p>
5	Weather Forecasting Using Data Mining	<p>Weather forecasting is the application of science and technology to predict the state of the atmosphere for a given location. Ancient weather forecasting methods usually relied on observed patterns of events, also termed pattern recognition. For example, it might be observed that if the sunset was particularly red, the following day often brought fair weather. However, not all of these predictions prove reliable. Here this system will predict weather based on parameters such as temperature, humidity and wind. This system is a web application with an effective graphical user interface. User will login to the system using his user ID and password. User will enter the current temperature; humidity and wind, System will take this parameter and will predict weather from previous data in the database. The role of the admin is to add previous weather data in the database, so that system will calculate weather based on these data. Weather forecasting system takes parameters such as temperature, humidity, and wind and will forecast weather based on previous records therefore this prediction will prove reliable. This system can be used in Air Traffic, Marine, Agriculture, Forestry, Military, and Navy etc.</p>

6	Engineering College Automation and Scheduling System	<p>This project uses a web application concept to facilitate the departmental system in educational institutes. It uses the most reliable way of uniquely identifying students through websites. This type of web application is very useful in school as well as in college for daily attendance. Through this web application, we can keep a systematic record of students' details, mark sheet, attendance and defaulters list. This project enables the easy way of maintaining class attendance with fewer efforts. The system also generates a brief report of attendance from the database according to subject-wise or date-wise as required. A defaulter list can be generated through the system. Staff and HOD has the option to take a print of the reports and defaulter list thus generated. Hence, this project introduces a manageable and systematic approach of maintaining student and staff records.</p>
7	Online Bookstore System On Cloud Infrastructure	<p>An online bookstore software project that acts as a central database containing various books in stock along with their title, author and cost. This project is a website that acts as a central bookstore. This web project has front end, back and sql as a back-end. Such online bookstores tend to get a large amount of online visitors. In order to provide optimal performance and avoid site crash the system needs to be hosted on a cloud infrastructure. The sql database stores various book related details. A user visiting the website can see a wide range of books arranged in respective categories. The user may select the desired book and view its price. The user may even search for specific books on the website. Once the user selects a book , he then has to fill in a form and the book is booked for the user. The system thus handles a large number of users with ease using azure based cloud infrastructure.</p>

8	Android Employee Tracker	<p>This system is a combination of web as well as android application where the user will be using the android application and admin as well as HR will work with web application. This application is meant for field work Employers. The Employee will have this application in his android phone, when the user will login to the system his image will be captured and his GPS location will be sent to the admin where admin will view image and GPS location in web application. After Login, GPS location of the employee will be tracked automatically by the system and sent to the admin after every 5 minutes .When employee logs out the system again the image will be captured as well as GPS location will be sent to the admin. In order to keep track of the attendance as well as payroll of the employee, this system plays a major role. The role of the admin is to add a new employee by entering his personal details and the admin will provide the employee with an identity number and password to the user so that he can access the application in his android phone. Admin can view the GPS location of the employee by entering Employee Identity Number as well as Date. Admin can check the salary of the particular employee by entering date and employee ID. Admin can view latitude and longitude of the GPS location sent by the employee. Admin can change the password of the employee. When the HR login to the system he can check the GPS location of the employee by entering employee ID and date. HR can check the salary of the particular employee by entering the employee identity number and date. This application helps admin and hr to easily check the salary of the employee. Since the GPS location of the employee is tracked, the employee will not attempt to add proxy attendance.</p>
9	Public Photography Contest With Live Voting	<p>We usually come across areas where a photographer can show his skills and win some award, but it was not properly portrayed. Using our System Admin / can conduct contests based on a topic. Admin can Choose the winner by 2 ways, No of Like on Photograph, Or Admin can directly select the winner. Admin can remotely view the images through, and select for best one, Photographer can register them self to this, so that they get notification of the completion (By Mail or SMS), Photographer's will be notified One week before the contest, If entries exceed the required, admin will first select top images and then users will vote for best one, One User will be allowed to vote for 3 photos only, Winner</p>

		of the contest will be notified by (Mail or SMS), The role of admin is to check that images belong to that photographer only, and he has not taken it from other sources.
10	Online Election System Project	Online Election System would have Candidate registration, document verification, auto-generated User ID and pass for candidate and Voters. Admin Login which will be handled by Election Commission .Candidate Login which will be handled By Candidate, Voters will get Unique ID and Password, Using which they can vote for a Candidate only once per Election. The project is beneficial for Election Commission, Voters as they can get to know the candidate background and choose wisely, and even for Candidates. The software system allows the Candidate to login in to their profiles and upload all their details including their previous milestone onto the system. The admin can check each Candidate details and verify the documents, only after verifying Candidate's ID and Password will be generated, and can remove faulty accounts. The software system allows Voters to view a list of Candidates in their area. The admin has overall rights over the system and can moderate and delete any details not pertaining to Election Rules.
11	Web Page Ranking Search Engine With Seo Suggester	A search engine is an information retrieval system that has various website data stored in it. It shows user appropriate results on search. It also consists of website data. The search engine records no of times the url was clicked on, it goes to the web url to fetch its meta data and gives points according to page errors. An seo suggester used with it allows user to enter a live url. Our system goes and scans the web pages, extracts its meta features and provides seo suggestions. The search engine is first fed with URLs of various website and stores this data in its database. After that the search engine allows user to search for particular data. The user can enter the data or text lines (query) to be searched. The system then uses this text and matches it with the content provided in the URLs fed in the database. The user query is matched with these contents and finally it generates a list of related URLs. The user can then click on the URLs thus generated and it will take them directly to the website. The search is based on users demand. Once user clicks on the links he sees the web page and all the data on it. It also calculates and displays the web page rank based on website meta score and number of visits. The system has an advance feature that suggests



		website's owner for suitable keywords, meta descriptions for their website's SEO.
12	Online Private Tutors Finder System	<p>This private tutor system will help to find tuition teachers from nearby locations. Teachers can also get a student just by logging onto the website and setting up the profile. In the personal tutor finder system, there are three entities namely, Admin, Parents, and Tutor. Admin can login, manage tutor by adding new teachers and update their profiles. Admin can also manage E-books by adding new books to the library. Admin can also check for the registered parents. Admin will register tutors and credentials will be shared with tutors by Email. Parents can register and login, tutors can be viewed by parents. Parents can filter and select the tutor and after selecting parents will raise the request of the demo lecture. After attending the lecture, they can book the tutor online, rate the tutor and view the E-Books. The tutor can login by using credentials that will be provided by mail. They can check for the request for a demo lecture and accept the request. They can also check the booking done. They need to set their profile. This private tuition system can help the tutors to get students and parents to find the best tutors for their children.</p>
13	Opinion Mining For Social Networking Site	<p>This system uses opinion mining methodology in order to achieve desired functionality. Opinion Mining for Social Networking Site is a web application. Here the user will post his views related to some subject other users will view this post and will comment on this post. The System takes comments of various users, based on the opinion, the system will specify whether the posted topic is good, bad, or worst. Users can change their own profile picture and can update their status. These changes can be viewed by various users. We use a database of sentiment based keywords along with positivity or negativity weight in the database and then based on these sentiment keywords mined in user comment is ranked. Once the user logs in to the system, the user can view his own status as well as he can view the topics posted by other users. When the user clicks on a particular topic, the user can give his own comment about the topic. System will use a database and will match the comment with the keywords in the database and will rank the topic. Users can edit their own profile and can change their profile picture. The role of the admin is to add post and ads keywords in the database. This application can be used by users who like to post views about some events that</p>

		are already held, or can post about the events that are going to be held. This application also works as an advertisement which makes many people aware about the topic posted. This system is also useful for the user's who need review about their new idea. This system is also useful for the user's who need review about any particular event that is posted.
14	Sentiment analysis for product rating	<p>This project aims to develop a sentiment analysis system for product rating. It is a web application. The main goal of this sentiment analysis system is to understand the hidden sentiments of customers in feedback and comments and analyze their product rating patterns. When registered customers use this app to view products, product features, and comment on different products, the sentiment analysis system will analyze the comments of various users and rank products accordingly. The system leverages a database of sentiment-based keywords (including positivity or negativity weight).</p> <p>So, when a user comments on a particular product, the sentiment analysis system analyzes the keywords in the comment to find the match with the keywords stored in the database. After analyzing the matches against the positive and negative keywords and sentiments, the system ranks a product as good, bad, and very bad. Thus, users can use this application to find out reviews on a product.</p>
15	Advanced employee management system	<p>This project aims to build an employee management system that consolidates all the relevant information on a company's human resources. It has two major components – Admin and Employee. The Admin is in charge of the company information, leave management and payroll, and can also add and tweak employee details. Likewise, employees can use the system to check their leave status, view salary details, yearly holiday list, and also for voicing grievances or resigning.</p>

16	Fingerprint voting system	<p>In this project, a fingerprint-based voting application can recognize users based on their fingerprint patterns. Since fingerprint authentication is unique for each person, the system can quickly identify the voters using their fingerprints. Naturally, a voter can vote for a candidate only once.</p> <p>The Admin adds all the names and photos of the candidates nominated for the election. The Admin then authenticates users by verifying their identity proof, and after verification, the voter is registered in the system. Furthermore, the Admin even enters the data when the election will end, after which the system will automatically delete the names and photos of the candidates and voters.</p> <p>The users can log in to the system via the unique user ID and password given by the Admin and then use their fingerprints to vote for their preferred candidate. Once the election is over, and the votes are counted, Both the Admin and users can view the election result using the election ID.</p>
17	Book Finder	<p>The library is the location where a vast number of books are collected. The organization and management are also significant. It is tiresome for a student to locate a single book in a collection of books.</p> <p>The librarians may not know the exact location of a specific book a student needs. What if we had an application that helps us locate the book? We only need to be connected to the local network and inside the library.</p> <p>This app would be of interest to librarians and even students looking for a specific book in the library. With the application, students will be able to scan the location and distance the book is at present. They will still see if the book is there or not. Automated updates facilitate updates of the latest books available in the library. To search for a specific book you can type the book name or authors.</p>

18	Law AI	<p>It can be expensive to hire a lawyer to represent you in court. An application that can help anyone understand the laws of the country.</p> <p>The user feeds the application with information about the crime committed. The application analyses and searches for similar cases around and how they were determined. With the use of machine learning models, a report is generated based on the information provided. The report provides information that can be used to defend one in court.</p>
19	Railway Tracking	<p>It has happened so many times that you have been waiting at the railway station for someone to arrive and you don't have any exact information about train timing and other stuff. So here we present to you a project on Railway Tracking and Arrival Time Prediction. Using this system user's can get the information about train timing, and is it on time or not, and other information. In this, the system will track the train timing at what time the train departed from a particular station and pass these timing details to another station's system where it will display the timing according to the train departed from the previous station. If the system finds any delay in the train due to a signal it will automatically update the train timing in the next station and will be displayed to viewers.</p> <p>In this system there is an admin module, who enters the details about trains and its timing and these details will be passed through an internet server and is fetched by the system on other stations, and there is another system that shows train information to the viewers on platform. Second system will get all the information of all trains but will automatically select the data that refers to a particular station and show that information on screen. For example if an admin at Mumbai station enters information about Delhi station Chennai station system will not be affected, but Delhi Station system will show the information about the train. This system works like – when a train departs late from a station, the admin will enter details about departure and its time, and this information goes in real time on the internet server and retrieved on other systems through internet server and shows the details on screen. Station masters on every station have a login wherein they may update train arrival time at their station when it arrives. This second System is installed on various locations on stations for viewers to view the information.</p>

		Admin will add information like train departed from station, expected arrival at destination, delay in the train schedule, etc. This project publishes real-time train schedule events to subscribing multiple client applications.
20	AI shopping system	<p>As the name suggests, the AI multi-agent shopping system is a shopping assistant, more like a recommendation engine. First, the system is fed with the details of a wide range of products. When a user registers in the system and searches for a specific product, the system returns the result of the most relevant items that match the search keywords entered by the user.</p> <p>Since the system is designed to study the search patterns of the user and based on the previous search and purchase history, it will also provide a curated suggestion of a list of items that are a close match to the searched item.</p> <p>The AI shopping system allows users to register and log in using an ID and password. After logging in, users can search for products online, perform a custom search across various product categories, add items to the cart, and choose the preferred payment option.</p>
21	Smart health prediction system	<p>An intelligent health prediction system can transform the way people take charge of their health while also connecting them to the nearest healthcare providers immediately. Many times patients are unable to access healthcare services due to some reason or the other. The smart health prediction system seeks to solve this problem by enabling patients to get instance healthcare advice and guidance online from licensed medical practitioners.</p> <p>The smart health prediction application is a consultation system for users. The system is fed with huge volumes of healthcare data (symptoms and the diseases or health issues associated with those symptoms). So, when a user enters their medical problems and symptoms, the application uses data mining to delve into the database and find the most accurate match of disease/illness related to those symptoms.</p> <p>Furthermore, the app also provides the contact information of various medical specialists and</p>

		practitioners with whom the patients can easily connect via the platform.
22	Software piracy protection system	<p>The goal of developing this project is to prevent software piracy and improve protection and security measures for software. Piracy is one of the biggest threats in the industry. Hackers use malware and malicious code to gain access to software products/systems, thus, putting at stake the entire security infrastructure of a company. As a result, it is pivotal to incorporate the necessary measures and protection systems to uphold the integrity of data as well as the copyright rights of software products.</p> <p>The software piracy protection system helps keep piracy threats at bay. Users must first register for using a software product and then purchase the software via online payment. Once the payment is complete, users can download the software and the serial key for the same. The software reads the ID of your machine (PC/laptop) and generates a unique user ID by using an algorithm. The user can now log in via the user ID by providing the serial key.</p> <p>The key is encrypted and is different for each machine, which makes it highly secure. After the serial key is entered, the software, too, will generate a key via encryption and match it with the serial key of the user for authentication. If the keys match, the user can access the software product, and if it doesn't match, the software remains locked.</p>
23	Multi Website Advertisement Handling System	<p>Online ad networks like google, yahoo, adchoices etc advertise their client products and services on search as well as partner websites. So here we concentrate on partner website ad posting and handling systems. Partner websites are websites that consist of ads by these online advertising networks. Ad networks handle these ads on multiple websites through a sophisticated advertisement scheduling system. The system has various ads scheduled in it. It decides which ad to display on which site and for what time duration. It consists of a strong online database system to manage this entire data. Our proposed project is a simulation of multi website handling by an ad network. We here use an online sql based database for this purpose. The system server is a web based application that is used to input new ads, their schedule and also to edit details as needed. The server</p>

		<p>system stores all the needed data into the database for further scheduling. The partner websites are constantly monitored and controlled by the server system for ad scheduling and updating. As soon as an ad expires the website contacts the server for the next ad to display. The server then processes the database to check for requirements and provides appropriate responses to the partner website. This system can be further enhanced by tracking clicks and conversions of advertisements.</p>
24	Smart Health Consulting Project	<p>This system aims at maintaining patient health records and even getting appointments from various doctors for related treatments. The system user must register as a member of this system and keep updating his medical history. Patients can then select a specialized doctor for respective treatments such as (skin specialists, ENT specialist cardiologists etc) at particular locations. Patients may also select suitable appointment timings for their meeting.</p> <p>Features in the system:</p> <ul style="list-style-type: none"> <li>i. General User area</li> <li>ii. Doctor's area</li> <li>iii. Patient's area</li> <li>iv. Transaction/Billing area</li> <li>v. Administrator area</li> <li>vi. Pharmacy area</li> <li>vii. Insurance area</li> </ul>
25	RFID Based Public Transport Ticketing System	<p>This application aims at the development and implementation of a system for ticketing. The application can be used anytime, anywhere and tickets will be available on the customer's phone in the form of "RFID". GPS module is used for providing validation of the ticket at the source and deletion at the destination. For security reasons, the information about every user is stored and encrypted on CLOUD. The cloud database makes the information easily accessible anytime it is needed. The system provides multiple ways of payment methods.</p>

26	Farming Assistant Web Service	<p>An application that helps farmers ensure greater profitability through direct farmer to supplier and farmer to farmer communication.</p> <p>This service boosts business communication and brings transparency to the system.</p> <p>The application allows for good farmer, retailer and supplier communication. The farmers login and communicate to respective dealers. When dealers publish an advertisement or offer, the respective farmers get notified via Sms message. The farmers may also submit their grievances and complaints to respective dealers or authorities using the application.</p>
27	Mobile Quiz Over Internet	<p>Mobile quiz is an application that allows people to challenge themselves with quizzes. Here are features of the application</p> <p>Features in the application:</p> <ul style="list-style-type: none"> <li>• Admin Login: Admin administers the system and feeds new Questions and Answers into the Server.</li> <li>• User Login: The user will have to register into the system for login and can play Quiz questions.</li> <li>• Quiz System: There will be options/answer space available for every Question. One Question can only have one Answer.</li> <li>• Marks Calculation: The system automatically keeps a track of all Questions being sent to the user, simultaneously calculates the total correct answer given by the user.</li> <li>• Report Generation: At the end of the Quiz, it generates a report for the User and Admin.</li> </ul>
28	Course management system	<p>The primary goal of the project is to facilitate seamless interaction between students and instructors in schools, colleges, and universities concerning the submission of projects, assignments, thesis, and receiving feedback from instructors. This project has three interlinked modules:</p> <p>Administrator module – This module is designed exclusively for managing administrative functions like creating accounts for students and instructors, creating the curriculum, coding the subjects, managing the employees, payroll, and so on. Basically, this module lays the groundwork for the other two modules.</p> <p>Students module – This module is designed for the usage of students. They can log in to their accounts to view their</p>



		<p>coursework, submit their projects, get feedback from instructors, etc.</p> <p>Instructor module – This module is for the instructors who can log in to their accounts and check the projects submitted by the students, communicate with the students, and offer guidance to them.</p>
29	Data visualization software	<p>Data visualization is a crucial element in the modern industry driven by Data Science, Business Intelligence, and Business Analytics. It refers to the visual representation of data, either in a graphical or pictorial format. The objectives of this project are:</p> <ul style="list-style-type: none"> <li>• To deliver precise and effective communication of the insights hidden in the data through appropriate graphical or pictorial representations.</li> <li>• To offer relevant insights into complex datasets for conveying ideas effectively.</li> <li>• To stimulate the viewer's attention and engagement while communicating accurate information.</li> <li>• To be functional as well as aesthetically pleasing.</li> </ul>
30	e-Healthcare management system	<p>2 modules: an administration module and a client module. While the administration module is concerned with Medicare Management that includes healthcare departments, doctors, nurses, ward, and clerks, the client module is for patients.</p> <p>The key features of the e-Healthcare management system are:</p> <ul style="list-style-type: none"> <li>• It establishes a clear line of contact and communication between doctors and patients.</li> <li>• It accurately analyses usage percentage of the hospital resources, including laboratory equipment, bed occupation ratio, administration, medicines, etc.</li> <li>• It leverages the CRISP-DM (standard cross-industry process for data mining) creating an accurate and effective management system.</li> <li>• It eliminates the problems of missing data and incorrect data.</li> </ul>

31	Electricity Billing System	<p>The main task of designing software is to automate something with greater efficiency. In our day-to-day lives, one of the biggest systems that are in dire need of automation is the billing system for electricity. Till today, bills are generated manually after readings are taken. Work done to automate reading meters and generating bills will go a long way in ensuring work is done in the most efficient way possible while ensuring accuracy in the numbers quoted on the bills.</p> <p>There are lots of additions that can be done to ensure this project remains on top.</p>
32	Supermarket Billing Software	<p>Most supermarkets use software for preparing the final bill before the goods are packed. This software itself can very easily be designed by someone starting in Java. (Note that most of the actual software used for billing in supermarkets uses Java itself). This billing software sums the amount for individual items and then adds them up to get the final sum that the customer has to pay. The number of individual items, the price of each item should be editable for the user. Also, there should be an option to remove the item from the list altogether.</p>
33	Memory Game	<p>This might be one of the most unique projects that one can come up with while learning the game. Java's graphics library allows the design of a wide range of small video games that can easily go up on your resume. In a memory game, a matrix consisting of a large number of smaller boxes will be available, the user's task will be to win the game by matching patterns on particular boxes. When the user clicks one box, it should show its pattern – if the next box clicked on has a similar pattern, both boxes should remain flipped and the score should be added. If the second box flipped does not have a similar pattern, both boxes should stop showing their pattern.</p>

34	Airline Reservation System	<p>We have seen everyday systems where we make reservations or cancellations for flights, haven't we? Designing a similar system as a project can be a very good way to add to the resume! The system should be a web-based one allowing all sorts of functionality that a normal reservation system would have fulfilled.</p> <p>One should be able to make reservations on certain flights after filling in the requisite data. Reservations should be saved somewhere so that they can be accessed again later for a particular user. One should also be able to cancel reservations provided the reservation to be canceled exists, else an error should be displayed.</p>
35	Food Ordering System	<p>We have all eaten out at restaurants or ordered from outside. It takes a long time for the order to be taken and for our food (and later, our bill) to be delivered, right? Automation helps solve this problem too. One piece of well-designed software can help minimize queue times a lot and thus help increase the number of customers served per day.</p> <p>The main functionality is to allow the user to order food and send it to the particular restaurant for which the order is being taken and show the user their bill.</p>
36	Media Player Application	<p>Design a multimedia player, should be able to play music of different types like audio video and allow users to sort songs and allow to set the personal playlist. Allow users to switch music, skip some time forward and backward.</p>