ATS Assessment 1

Advanced Class (Group Assessment)

Basic Social media app
Build a social networking application where a user can join a group. A closed group is a group that cannot be accessed unless a request is made to the admin. An open group can be freely accessed.
Users should be able to do the following:

○ Sign up
○ Sign in and out
○ Change password
○ Recover Password
○ Update profile (including uploading profile picture)
○ Create group (automatically becomes admin of group)
○ An admin can make other members of the group an admin (A group should have a minimum of one admin and maximum of 3 admins)
○ An admin can remove members of the group
○ Users should be able to view groups list (differentiate between closed and open groups), search groups,, join an open group, make a request to join a closed group and exit a group.
○ Admin should be able to suspend members. Suspended members must not be able to post or comment or reply
○ Members of the group should be able to make a post, add attachments to the post, comment on a post and reply on a comment.
○ Members should be able to like posts, comments and replies.
○ Posts can have a title (optional).
○ An admin should be able to hide a post or comment or reply from view.
○ Admins should get notifications on activities in the group.
○ Members should get notifications on activities on their post or comment.
○ Admin can create events - title, description, start time (including date), end time (including date), location (if applicable). Creating events send an invite to all group members.
○ Admin can edit events that have not started or are expired.
○ Admin should be able to view all events list
○ Members should be able to view events on a calendar view
○ Members should be able to respond to an event invite as yes, no or maybe.
○ Admin should be able to view an event, view summary of invite information (total number of responses as well as number of responses for each type of responses and other data points you can think of)
○ Admin should be able to create polls, edit polls before start date, view poll result summary
○ Members should be able to take polls. Suspended members are exempted from polls
○ Members should be able to view poll result summary after poll has ended.

Advanced Class (Individual)

Job vacancy site - Adeleke Awwal
A site where people can go to view job postings. Admins will be able to administer the site and do the following:
○ Post vacancies
○ Set vacancy expiry. (Expired vacancy should not be displayed)
○ Site visitors should be able to see the list of job vacancies, view vacancy detail like and comment.
○ Admins should be able to hide comments.

Newspaper site - Abdullahi Salaam
A site where people can go to view news. Admins will be able to administer the site and do the following:
○ Post news, edit news, delete news
○ Add tags to news
○ Create draft news and set publishing date. On the set date, news should start displaying
○ Hide news comments
Site visitors should be able to see the published news, search news by title, content or tag, view a specific news, like and comment on a news

Contact Management App - Azubuine Samuel
Users should be able to:
○ Sign up
○ Sign in and out
○ Change password
○ Recover Password
○ Update profile (including uploading profile picture)
○ View contacts list (Favourites contacts should show at the top of contacts list)
○ Add a contact, edit a contact and delete a contact
○ Mark contacts as favourites.
○ Add category to contacts e.g Family, Work, Friends etc.
○ View contacts by category
○ Upload contact image
○ Export all contacts in form of a csv file
○ Import contacts from csv
○ Include a small dashboard showing the number of contacts, number of male contact, number of female contacts, number of favourites and other data points according to your discretion

Assessment test app - Lukman Abisoye

Organisations can:

○ Sign up
○ Sign in and out
○ Edit organisation detail
○ Create assessments with questions as drafts. Assessment must have a preset duration and percentage score for pass.
○ Each question should have a minimum of two choices
○ Can approve assessment drafts.
○ Approved Assessments will have a unique link that can be shared with applicants.
○ Assessment links must not accessible after assessment duration has ended.
○ Applicants that click on link will enter their information first then commence assessment after information has been saved.
○ Organisation admins should be able to view assessment summary on the assessment dashboard. Dashboard should show basic assessment information, number of people that attempted assessment, total number of people that finished, total number of people that could not finish and a table showing each participant, number of attempted questions, number of correct answers, number of incorrect answers, score, percentage score and whether participant passed or failed based on percentage score for pass set on assessment.

Assessments should be created as drafts that can be edited or deleted. Assessment should run for the duration and kick the applicant out when the duration is complete

Weather app - Yusuf Ogundele

A weather application where you can select a location from a list of locations and it tells you the weather information of that location. (Locations should be cities in Nigeria.)

On opening the app, it should show the weather information of the current location of the user.

A visitor can save his email and a location. If a visitor successfully does this, the app should send an email to the visitor with the weather condition of the location sent every 6am. A visitor can unsubscribe from the email notification via a link in the email

Notes App - Toluwanimi Ogunbiyi

Users should be able to:

○ Sign up
○ Sign in and out
○ Change password
○ Recover Password
○ Update profile (including uploading profile picture)
○ View stored notes (Pinned notes should show at the top of list)
○ Add a note, edit a note and delete a note

○ Upload images and files to notes.
○ Pin notes.
○ Add category to notes e.g Personal, Work, Friends etc.
○ View notes by category
○ Share note by link.
○ Link can be set with permissions e.g view only or view and edit.
○ Can set passcode for links. Passcode will be required for whoever tries to access a passcoded link

E-commerce (With elastic search) - Ahmad Sharafudeen
Users should be able to:
○ Sign up
○ Sign in and out
○ Change password
○ Recover Password
Customers should be able to:
○ Search products (using elastic search)
○ Add product to cart
○ Checkout
Admin should be able to:
○ Create product
○ Remove product
○ Edit product e.g price, name, description etc.
○ View global sales history and product specific sales history

E-commerce (With Solr) - Basheer Balogun
Users should be able to:
○ Sign up
○ Sign in and out
○ Change password
○ Recover Password
Customers should be able to:
○ Search products (using Solr)
○ Add product to cart
○ Checkout
Admin should be able to:
○ Create product
○ Remove product
○ Edit product e.g price, name, description etc.
○ View global sales history and product specific sales history

E-commerce (With Sphinx) - Abraham Adekunle
Users should be able to:
○ Sign up
○ Sign in and out

○   Change password
○   Recover Password
Customers should be able to:
○   Search products (using Sphinx)
○   Add product to cart
○   Checkout
Admin should be able to:
○   Create product
○   Remove product
○   Edit product e.g price, name, description etc.
○   View global sales history and product specific sales history

Beginners
- Write a program that takes a text and returns each unique word and the number of times each unique word occurs in that text.
- Write a program that takes an integer between 0 and 1 million and returns the word equivalent
- The items in a shopping cart can be modelled in a dictionary. Write a program that can add a new item, remove an item, update an item's
- Write a program that can return factors of a number
- Write a program that can return common factors of two or more numbers.
- Write a program that reads words from a provided text file and returns each unique word, the number of times they appear, the line numbers they appear at and whether its a consonant or vowel.
- In addition to above, the program should output the result above to a csv file whose column will be word, is consonant or vowel, number of times it appears, slash separate list of the line numbers.
- Using your knowledge of OOP, write the inheritance hierarchy for all the types of vehicles that you know. The top level class should be Vehicle. Structure your hierarchy as much as possible to give it as many levels as possible. Your vehicle class must be created with a name, mileage and capacity attributes.
- From above, add a method to add passenger, to remove passenger, to return total number of passengers and to calculate total fare based on number of passengers.

There will be a Q&A session with instructor to test your knowledge on python.