Georgia Institute of Technology
College of Computing
School of Computing Instruction
Course: CS 2340 – Objects and Design
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Team-based Project
Second Project – Spotify Wrapped!

Description

This project will help you reinforce the different concepts we have covered and build your skills in software engineering. For this purpose, you will be asked to work in a team of peers to design and build a software product. The second project is a **music/podcasts statistics summary** very similar to Spotify Wrapped except available year-round. As a user, you will be able to sign into your app using your actual Spotify profile, then have a slideshow-esque presentation of different aspects of your music listening displayed in colorful and fun ways. Different from the first project, project 2 will allow different users to sign into the app too, with their data being stored and persisted behind the scenes.

This is designed to be a fun project that you can have a lot of personal control over. While there are two base user stories that everyone must complete that form the core of what the app is, the rest of the stories can be chosen based on the team's personal vision, capacity, experience, and interests.

Each team has to collect **32 story points** from the customizable user stories, with each user story in that category having a set amount of story points based on difficulty. This means that choosing a more difficult user story will not penalize you, as you will be able to do less stories overall!

Exceeding the minimum amount of story points will make your client TA's grading more lenient. However, keep in mind that overestimating your capacity can negatively impact your overall performance.

Grading
The project will be graded based on two core factors: product and process.

- **Concerning your product**, your team will need to **satisfy their client (your TA)** based on the user stories you all agreed with. User stories will be graded as whole-or-nothing: partial functionality will not earn you points! Product-wise, 32 user stories will satisfy this criterion.
- **Concerning your process**, your team will need to follow **Scrum** and its different elements. Communication, cooperation, planning, feedback, and balance are essential. Issues that will sanction your team are:

  o   Lack of effective communication with the client.
  o   Lack of effective communication among teammates.
  o   Lack of planning and follow-ups (daily standups).
  o   Unbalanced distribution of work.
  o   Lack of cooperation and conflict resolution.

At the end of the project, based on these criteria, your grade will be calculated as follows:

1. **Outstanding** (100% of the grade): *Both product and process were successful!*
   a. Product: Your app features all user stories indicated (32 story points) and presents a nice GUI.
      AND
   b. Process: The process was successful and incorporated effective communication, cooperation, planning, feedback, and balance. No issues were reported.

2. **Okay** (70% of the grade)--When **at least one of the following** is true:
   a. Product: Your app features less than 32 story points.
   b. Product: Your app has flaws in its GUI design.
   c. Process: There was a lack of effective communication with the client.
   d. Process: There was a lack of effective communication among teammates.
   e. Process: There was a lack of planning and follow-ups (daily standups).
   f. Process: There was unbalanced distribution of work.
   g. Process: There was a lack of cooperation and conflict resolution.

3. **Less than Okay** (50% of the grade)--When **two to four of the following** are true:
   a. Product: Your app features less than 32 story points.
   b. Product: Your app has flaws in its GUI design.
   c. Process: There was a lack of effective communication with the client.
   d. Process: There was a lack of effective communication among teammates.
   e. Process: There was a lack of planning and follow-ups (daily standups).
   f. Process: There was unbalanced distribution of work.
   g. Process: There was a lack of cooperation and conflict resolution.

4. **Rejected** (0% of the grade)--When **five or more of the following** are true:
   a. Product: Your app features less than 32 story points.
   b. Product: Your app has flaws in its GUI design.
   c. Process: There was a lack of effective communication with the client.
   d. Process: There was a lack of effective communication among teammates.
   e. Process: There was a lack of planning and follow-ups (daily standups).
   f. Process: There was unbalanced distribution of work.
   g. Process: There was a lack of cooperation and conflict resolution.

Disclaimer #1: Members not contributing to their teams and projects will get a grade of zero (0) on the second project. Teams are required to record teammates' contributions and to effectively communicate with their TA. Not communicating issues early may lead the team to be graded below "Outstanding."

Disclaimer #2: This is a *very simple* rubric. The cornerstone is that you and your team *communicate* with your TA. Be **proactive** when reaching out and showing your progress on the project!

Submission requirements

This project also involves creating a team website that showcases your submission. This is a chance for your team to highlight your hard work, creativity, and technical achievements!

Objectives:
The website should include:
1. Team Presentation: Introduce your team, detailing each member's name, role, and contributions.
2. Spotify Wrapper Description! Elaborate on the app your team designed and developed and describe how the different screens and features respond to the proposed user needs you selected.
3. Process description: Explain how your team followed Scrum and the design decisions behind your solution: principles, patterns, etc. Use diagrams as tools to communicate your rationale.
4. Video Demonstration: Include a demo video showcasing your app and its features.

Disclaimer: This website is intended to help you all build your portfolios!

Recommended Website Builders:
To create your website, you may consider using one of the following builders for ease of use and professional results.
(keep in mind that you may also consider using other website builders, but try not to complicate yourselves):
- Wix
- Squarespace
- Weebly
- Google Sites
- Zyro
- GoDaddy Website Builder
- Jimdo
- Webflow

Submission Guidelines:
- The website should be aesthetically pleasing, easy to navigate, and well-organized.
- Ensure the content is clear, concise, and free of grammatical errors.
- The video should be high-quality, with clear audio and visuals.

Deliverables
1. An URL to your team website.
2. A zip file of your Android project.

Base User Stories:

1. User Story #1: As a user, I want to be able to view a presentation of the different aspects of my personal *Spotify music listening tastes* displayed in colorful and fun ways.
   Acceptance criteria:
   ● Able to log into your personal Spotify account from the app.
   ● Able to parse through the account's data to generate a detailed and creative summary of the user's music listening habits and tastes.

2. User Story #2: As a user, I want to be able to create an account and log into to the app so I can view my past Spotify Wrapped summaries.
   Acceptance criteria:
   ● Able to create an account that holds your associated Spotify info.
   ● Account information persists after the app is closed.
   ● Provide a screen where past Spotify Wrapped summaries can be accessed and viewed.
   ● Provide a screen where your login info can be updated.
   ● Provide a screen where you can delete your account.

Customizable User Stories (choose any combination, minimum 32 points):

1. As a user, I want to be able to grant my friends the ability to view my Spotify Wrapped.
   a. **3 points.**
   b. **+2 points** if you receive touch notifications once you are granted viewing access.

2. As a user, I want to be able to invite a friend to join a Duo-Wrapped that displays and compares both of our tastes in a creative combined way.
   a. **13 points.**

3. As a user, I would like for a LLM API to dynamically describe how someone who listens to my kind of music tends to act/think/dress during my Spotify Wrapped.
   a. **8 points.**
   b. **+3 points** if you use the LLM API to compare your taste with a friend's during a Duo-Wrapped.

4. As a user, I would like to be able to generate special holiday versions of my Spotify Wrapped on specific days of the year.
   a. **5 points.**
   b. **+2 points** for touch notification reminders about the limited-time Spotify Wrapped variants.

5. As a user, I would like to be able to hear clips from some of my top songs play during my Spotify Wrapped (*due to API limitations, at least 1 group member needs Spotify Premium to attempt this story!*).
   a. **13 points.**
   b. **+3 points** for integrating music playback into Duo-Wrapped or the special holiday versions of Spotify Wrapped.

6. As a user, I would like fun games embedded into my Spotify Wrapped that quiz me on my own taste (finish the lyrics, guess your most listened to musician, etc.).
   a. Base points scale based on game complexity and creativity:
      i. Simple/uncreative games = **5 points.**
      ii. Moderately complex/creative games = **8 points.**
      iii. Complex/highly creative games = **13 points.**
   b. **+5 points** for integrating games into Duo-Wrapped or special holiday versions of Spotify Wrapped.

7. As a user, I would like new artists recommended to me based on my music tastes.
   a. **3 points.**
   b. **+2 points** for recommending artists based on overlapping tastes between you and a friend.

8. As a user, I would like to control the timespan of the generated Wrapped summary (1 week, 1 month, 1 year, all time, etc.).
   a. **5 points.**

9. As a user, I would like to view a page where I can post my Spotify Wrapped and see all Spotify Wraps that other users made public.
   a. **8 points.**
   b. **+3 points** for allowing Duo-Wraps to be published, with both associated accounts having joint ownership of the post.
   c. **+13 points** for adding the ability to comment on and like Wraps in addition to adding a filter option that only shows posts you've liked/commented on.
   d. **+2 points** for receiving touch notifications when somebody comments on your post.
   e. **+3 points** for being able to "follow" other users and optionally view only their posts.

10. As a developer, I would like a CI/CD pipeline to test my code to verify that it builds and is formatted correctly.
    a. **5 points.**
    b. **+1 point** for not allowing branches that have failed CI/CD runs to be merged into main in GitHub.

11. As a user, I would like to be able to export a summary of my Wrapped as an image file that I can easily copy and share with others outside of the app.
    a. **3 points.**

12. As a user, I would like to be able to sign into my account from any device (Firebase cloud storage instead of SQLite).
    a. **8 points.**

13. As a developer, I would like to be able to use pre-made templates for PRs and issues in GitHub.
    a. **1 points.**

14. As a user, I would like to be able to access a settings page where I can toggle a dark-mode and change my notification preferences.
    a. **3 points** (must do at least one other user story with notifications involved!).