Project Proposal Form

|  |  |  |
| --- | --- | --- |
| Name: Sam Hunt | | Class: C03 |
| Project title (Working title): Meal Planner App | | |
| Outline a description and the aims of your project: | * User inputs various ingredients that they have around their house * The inputted ingredients are matched to an open-source food database with nutrition info * An algorithm then finds what meals can be made with these ingredients and can list based on ‘healthiness’ or cuisine or similar criteria. * Under each recipe, there would be a match % showing how many of the ingredients the user has already, and they would be able to access a list of what to buy. * Maybe add a meal planner for the week? | |
| Potential client/ third party/ end-user(s) and who they are e.g. a local business owner, a person interested in board games: | * My dad or mum for meal prep | |
| What kind of access do you have to your potential end-user? | * Talk in person, WhatsApp | |
| What potential programming skills ([from Table 1](https://www.aqa.org.uk/subjects/computer-science-and-it/as-and-a-level/computer-science-7516-7517/subject-content-a-level/non-exam-assessment-the-computing-practical-project#Example_technical_skills) or skills that are not listed) will it enable you to demonstrate? | * Complex user-defined algorithm * Complex data model * API + JSON parsing * OOP with classes | |
| What data will your system potentially store and access? | * Open Food Facts database * (possibly) Spoonacular API – might do too much work for me. * (storing) the ingredients the user has already | |
| Have you prototyped part of the project? If so, describe it and the next steps: | No | |
| Useful links related to the proposed project: | <https://world.openfoodfacts.org/data> Open Food Facts <https://openfoodfacts.github.io/openfoodfacts-server/api/tutorials/comparing-sodas/> intro to their API  <https://spoonacular.com/food-api/docs> Spoonacular | |

# Alternative Project Idea (optional but recommended)

|  |  |  |
| --- | --- | --- |
| Name: Sam Hunt | | Class: C03 |
| Project title (Working title): Guitar audio to MIDI / guitar tab converter | | |
| Outline a description and the aims of your project: | The user can record them playing a guitar solo into a mobile app, which then identifies the individual notes played and converts it to a guitar tab format so that others can easily play the same solo.  It would do this by identifying the attack on each note in the soundwave, then figuring out the pitch and estimating length. I would likely add different tuning options so the tab can be adjusted accordingly – this should be relatively simple.  I would also consider adding support for slide notes or pitch bends, but this might be tricky to implement. | |
| Potential client/ third party/ end-user(s) and who they are e.g. a local business owner, a person interested in board games: | My friend Alex Kennington, guitar player | |
| What kind of access do you have to your potential end-user? | In person talks, messaging on any app, Discord. | |
| What potential programming skills ([from Table 1](https://www.aqa.org.uk/subjects/computer-science-and-it/as-and-a-level/computer-science-7516-7517/subject-content-a-level/non-exam-assessment-the-computing-practical-project#Example_technical_skills) or skills that are not listed) will it enable you to demonstrate? | Advanced matrix operation – spectrograms  List / Queue operations – Real time audio processing  Dynamic object generation – Note objects created | |
| What data will your system potentially store and access? | Different preset guitar tunings | |
| Have you prototyped part of the project? If so, describe it and the next steps: | No | |
| Useful links related to the proposed project: |  | |