Course Project Proposal for Rust Programming

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Project Topic Area (Theme):

The project will have a theme relating to clicker games. While the other options were very interesting and I've done similar projects in the past, I've never made a clicker based program. The idea of making something from scratch without prior knowledge always entices me, so I went with the clicker game theme. The program's name will be Sand Drop Clicker.

Sand Drop Clicker (The Project):

Based on the project name, you can already get an idea of what it'll be about, but I'll thoroughly explain it to ensure no detail is missed. Sand Drop Clicker will be about dropping sand into a container, and the amount of sand dropped will depend on the number of clicks the user makes. Grains of sand cannot be exchanged for currency until the container for the sand is full. The game will provide the user with upgrades in exchange for currency, which will be in dollars ($). These upgrades will range from the types of consumers of sand to personal upgrades, like the container sizes. Another interesting aspect of the program is that there will be an end goal, which is uncommon in many clicking games. The end goal will involve reaching 1 billion dollars, becoming the world's greatest sand sales man. The end goal won't reset your progress, so you'll be able to gain even more wealth.

Specific Aspects of the Program:

The overall program will be done in a web interface, which will be done by using a rust crate. I plan to implement the visual of dropping sand down into a box, which will use the web canvas feature to implement. I had also originally planned that the user would click anywhere on the canvas and sand would fall from that position, but it might be reduced to a simple button for the user to click on, due to time constraints. I would also like to implement a method to store the user's progress using the browser's local storage. Another crate that I plan to include is the random and time related crates so that I could provide users with better and more interesting game upgrades.

Potential Issues:

While many aspects of the program do appear feasible, I do fear that the learning curve might take out more time than expected for development. Another major issue is that if I struggle too much with the web interface, I would have to either transfer over to a GUI or terminal development, which would also drastically change other features I had planned to implement in the program. I would have to find an alternative method for storing the saves and learn a new way to represent the visuals of dropping sand. Besides the time constraint, I do think I have a good possibility of finishing the main parts of the project.

Git Repo:

The git repo is called Sand-Drop-Clicker, and it contains a brief description of the project and an Apache 2.0 license. This git repo is also public: Sand-Drop-Clicker.

URL: https://github.com/Artemsuprun/Sand-Drop-Clicker