NEA Computer Science Proposals:

Webpage

Exercise App

Multiuser competitive exercise app that revolves around competing against others in gaining exercise points. It should have an online leader board system to keep track of points of different people and reward people for exercising.

SQL used where appropriate to access and edit data of a user and a leaderboard.

OOP in creating the user object with attributes such as name, points, age etc.

Ideally, the app should be able to use the location of a device to help track an exercise. (May require an hash algorithm and the Diffie hellman protocol when exchanging data between a device and a server)

Pygame Student themed Tycoon Game

Single player tycoon game based on the life of a student. It should involve a currency/point system where the student can use their points/currency to purchase new upgrades to increase their productivity in producing more points and currency.

Upgrades will include a vending machine, textbooks, coffee station, sporting events.

OOP to create the user object with details about score, level. Other objects may be the upgrades available as well as the graphical images corresponding to the upgrade that should appear on the screen.

May include a database of the top scores of users. (Requires SQL)