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CS-499: Computer Science Capstone

Southern New Hampshire University

August 2, 2020

Narrative: Software Design/Engineering

1. This artifact is a complete game that allows a user to play a round of 5-card draw poker (without betting rounds) against a dealer AI. This artifact was an option for the final project form Computing III at UMass Lowell. This artifact was originally completed in the Spring of 2016.
2. I included this artifact in my ePortfolio because it is a very complex, object-oriented piece with several files and classes. It shows my ability to translate a real-life concept into classes and objects, which is a basis for software engineering. For this artifact, I added a straight flush checking function and a royal draw checking function to the hand of 5 class, as well as updating the four to straight and flush checking functions. In the dealer class, changed the priority queue for the dealer draw AI to reflect the new functions. Lastly, the driver class has new tests to test if the new functions work as intended.
3. I met the course objectives with this artifact. Due to the complex nature of this project, it fulfills the well-rounded techniques objective because the project is modular enough to easily add new functions, which is important in collaborative environments. The artifact also uses complex algorithms to simulate an existing game. This project has the widest objective coverage out of my three artifacts.
4. In order to enhance this artifact, had to get back into the mindset I had four years ago when designing it. I found that I had already considered many of the things that I thought to add to this artifact, but there was still plenty of room to improve. I needed a refresher on classes and objects, as well as the command-line compile techniques that we had to use at UMass. The most difficult aspect of working on this artifact was recreating the original programming environment, especially with the makefile.