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For the final project of info 2313, object-oriented programming (OOP) was the key component to creating a fully flushed out and advanced program. OOP is for complex programs, and programs with a large amount of variables and instances where standard procedural programming would crumble and crash when programmed. Using classes and methods, the crazy eights program can generate and manage a multiplayer game of cards and be able to adapt to various situations and wrap itself up when the game is completed. The program uses various concepts such as encapsulation when hiding of the various piles and players from view of outside users. Inheritance is used in the many objects the program holds and the functionality of these classes from abstract and other classes are used constantly with players drawing and playing cards during the game and there are instances of overriding in the pile class with various outputs. Programming and completing this project began to prove difficult once I started the score method, and it really helped to show how beneficial and difficult OOP can be. Score not only required a extensive while loop for its results but also calling upon different classes entirely and making good use of it as the score method only needed to call upon the hand class to complete its task. OOP while very helpful when programming can also be confusing and impossible to fix if there were any problems without a UML diagram. The program was easy to see in its entirety using the unified modelling language (UML), and once it was up it helped showcase the entire project from its various inheritances, to the abstract classes and how they are all connected. Having the UML as a class diagram gives views a extensive look into each method and class in each object of the program. The UML diagram also shows the various attributes that certain classes and their operations within the program and how they connect using inheritance. Defining each class and implementing them was a challenge, but the overall OOP structure works well and the project really shows off how the whole process functions and the level of detail required for a whole program.

Demo

UnitTests

Start

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