**Functionality Checklist**

CO2402 2023 Assignment Checklist for < Adam James Anthony Hall >

Please fill in the grid to indicate which features you have attempted, and (where appropriate) which code file we should look in to see the implementation of that feature. This will help us mark your work more efficiently and avoid the possibility of us missing something in your code.

|  |  |  |
| --- | --- | --- |
| **Feature** | **Attempted** | **Code file(s) (if appropriate)** |
| **Any Grade > 0%** | | |
| Can demo code compiling and running in the lab | YES |  |
| Copy of console output | YES | Seed Number: 262628  Welcome to U-Can't. Let the winnowing begin...  Round: 1  Drawing Cards  Plagiarist has drawn 1 Hard Worker 2 4  Plagiarist has drawn 1 Lazy Complainer 2 4  Drawing Cards  Piffle-Paper has drawn 1 Scanner Scrammer 1 1  Piffle-Paper has drawn 1 Scanner Scrammer 1 1  Piffle-Paper chooses card: 1 Scanner Scrammer 1 1  Plagiarist chooses: 1 Hard Worker 2 4  Printing Table  Piffle-Paper cards on table:  1 Scanner Scrammer 1 1  Printing Table  Plagiarist cards on table:  1 Hard Worker 2 4  Using Ordinary Student Card  Card Killed: 1 Scanner Scrammer 1 0 by player Plagiarist  Piffle-Paper prestige is now 28  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 28  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 28  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Plagiarist prestige is now 30  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 2  Drawing Cards  Plagiarist has drawn 10 Scary Austrian 4 6  Plagiarist has drawn 1 Hung Over 2 1  Drawing Cards  Piffle-Paper has drawn 3 Course Accreditation 1  Piffle-Paper has drawn 5 Industrial Placement 2 3 1  Piffle-Paper chooses card: 3 Course Accreditation 1  Plagiarist chooses: 1 Hung Over 2 1  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Hard Worker 2 1  1 Hung Over 2 1  Using Ordinary Student Card  Piffle-Paper prestige is now 28  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 28  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 28  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Hard Worker 2 0 by player Piffle-Paper  Card Killed: 1 Hard Worker 2 0 by player Piffle-Paper  Plagiarist prestige is now 29  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 3  Drawing Cards  Plagiarist has drawn 8 Mitigating Circumstances 1  Plagiarist has drawn 11 Graduate Student 2 2 2  Drawing Cards  Piffle-Paper has drawn 9 Easy Target 0 6 1  Piffle-Paper has drawn 7 Research Funding 1  Piffle-Paper chooses card: 7 Research Funding 1  Plagiarist chooses: 11 Graduate Student 2 2 2  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Hung Over 2 2  Using Ordinary Student Card  Piffle-Paper prestige is now 28  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 28  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 28  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Plagiarist prestige is now 28  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 4  Drawing Cards  Plagiarist has drawn 1 Sneaky Cheat 2 4  Plagiarist has drawn 4 Feedback Forum 2 2  Drawing Cards  Piffle-Paper has drawn 1 Sneaky Cheat 2 4  Piffle-Paper has drawn 4 Feedback Forum 2 2  Piffle-Paper chooses card: 4 Feedback Forum 2 2  Plagiarist chooses: 1 Sneaky Cheat 2 4  Printing Table  Piffle-Paper cards on table:  4 Feedback Forum 2 2  Printing Table  Plagiarist cards on table:  1 Hung Over 2 2  1 Sneaky Cheat 2 4  Using Ordinary Student Card  Card Killed: 4 Feedback Forum 2 0 by player Plagiarist  Piffle-Paper prestige is now 22  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 22  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 22  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Hung Over 2 1 by player Piffle-Paper  Plagiarist prestige is now 27  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 5  Drawing Cards  Plagiarist has drawn 1 Basket Weaver 1 1  Plagiarist has drawn 1 Basket Weaver 1 1  Drawing Cards  Piffle-Paper has drawn 10 Irritating Idiot 3 5  Piffle-Paper has drawn 1 Sneaky Cheat 2 4  Piffle-Paper chooses card: 10 Irritating Idiot 3 5  Plagiarist chooses: 1 Basket Weaver 1 1  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Hung Over 2 1  1 Sneaky Cheat 2 3  1 Basket Weaver 1 1  Using Ordinary Student Card  Piffle-Paper prestige is now 22  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 22  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 22  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Hung Over 2 0 by player Piffle-Paper  Card Killed: 1 Hung Over 2 0 by player Piffle-Paper  Plagiarist prestige is now 26  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 6  Drawing Cards  Plagiarist has drawn 1 Basket Weaver 1 1  Plagiarist has drawn 3 Course Accreditation 1  Drawing Cards  Piffle-Paper has drawn 8 Mitigating Circumstances 1  Piffle-Paper has drawn 1 Basket Weaver 1 1  Piffle-Paper chooses card: 8 Mitigating Circumstances 1  Plagiarist chooses: 1 Basket Weaver 1 1  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Sneaky Cheat 2 3  1 Basket Weaver 1 4  1 Basket Weaver 1 1  Using Ordinary Student Card  Piffle-Paper prestige is now 22  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 22  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 22  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Sneaky Cheat 2 2 by player Piffle-Paper  Card Attacked: 1 Basket Weaver 1 3 by player Piffle-Paper  Plagiarist prestige is now 25  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  Using EasyTarget Card  Round: 7  Drawing Cards  Plagiarist has drawn 1 Clever Dick 2 4  Plagiarist has drawn 6 PASS Leader 1 3 1  Drawing Cards  Piffle-Paper has drawn 8 Mitigating Circumstances 1  Piffle-Paper has drawn 1 Clever Dick 2 4  Piffle-Paper chooses card: 1 Clever Dick 2 4  Plagiarist chooses: 6 PASS Leader 1 3 1  Printing Table  Piffle-Paper cards on table:  1 Clever Dick 2 4  Printing Table  Plagiarist cards on table:  1 Sneaky Cheat 2 2  1 Basket Weaver 1 3  1 Basket Weaver 1 5  Using Ordinary Student Card  Card Killed: 1 Clever Dick 2 0 by player Plagiarist  Piffle-Paper prestige is now 14  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 14  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 14  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Sneaky Cheat 2 1 by player Piffle-Paper  Card Attacked: 1 Basket Weaver 1 2 by player Piffle-Paper  Card Attacked: 1 Basket Weaver 1 4 by player Piffle-Paper  Plagiarist prestige is now 24  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 8  Drawing Cards  Plagiarist has drawn 6 PASS Leader 1 3 1  Plagiarist has drawn 6 PASS Leader 1 3 1  Drawing Cards  Piffle-Paper has drawn 11 Graduate Student 2 2 2  Piffle-Paper has drawn 1 Teachers Pet 4 4  Piffle-Paper chooses card: 11 Graduate Student 2 2 2  Plagiarist chooses: 6 PASS Leader 1 3 1  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Sneaky Cheat 2 1  1 Basket Weaver 1 2  1 Basket Weaver 1 4  Using Ordinary Student Card  Piffle-Paper prestige is now 14  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 14  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 14  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Sneaky Cheat 2 0 by player Piffle-Paper  Card Killed: 1 Sneaky Cheat 2 0 by player Piffle-Paper  Card Attacked: 1 Basket Weaver 1 3 by player Piffle-Paper  Card Attacked: 6 PASS Leader 1 4 1 by player Piffle-Paper  Plagiarist prestige is now 23  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 9  Drawing Cards  Plagiarist has drawn 1 Teachers Pet 4 4  Plagiarist has drawn 9 Easy Target 0 6 1  Drawing Cards  Piffle-Paper has drawn 9 Easy Target 0 6 1  Piffle-Paper has drawn 1 Hard Worker 2 4  Piffle-Paper chooses card: 9 Easy Target 0 6 1  Plagiarist chooses: 9 Easy Target 0 6 1  Printing Table  Piffle-Paper cards on table:  9 Easy Target 0 6 1  Printing Table  Plagiarist cards on table:  1 Basket Weaver 1 2  1 Basket Weaver 1 3  6 PASS Leader 1 4 1  Using Ordinary Student Card  Card Killed: 9 Easy Target 0 0 1 by player Plagiarist  Piffle-Paper prestige is now 8  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 8  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 8  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Basket Weaver 1 1 by player Piffle-Paper  Card Attacked: 1 Basket Weaver 1 2 by player Piffle-Paper  Card Attacked: 6 PASS Leader 1 3 1 by player Piffle-Paper  Card Attacked: 6 PASS Leader 1 4 1 by player Piffle-Paper  Plagiarist prestige is now 22  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Round: 10  Drawing Cards  Plagiarist has drawn 1 Scanner Scrammer 1 1  Plagiarist has drawn 7 Research Funding 1  Drawing Cards  Piffle-Paper has drawn 1 Smarty Pants 4 2  Piffle-Paper has drawn 8 Mitigating Circumstances 1  Piffle-Paper chooses card: 8 Mitigating Circumstances 1  Plagiarist chooses: 7 Research Funding 1  Printing Table  Piffle-Paper cards on table:  Printing Table  Plagiarist cards on table:  1 Basket Weaver 1 1  1 Basket Weaver 1 2  6 PASS Leader 1 3 1  Using Ordinary Student Card  Piffle-Paper prestige is now 8  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 8  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 8  Using PassLeader Card  Using ResearchFunding Card  6 PASS Leader 3 4 1has recieved a power increase of 2  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Using Ordinary Student Card  No student cards to use  Using Plagiarism Hearing Card  Using Course Accreditation Card  Card Attacked: 1 Basket Weaver 1 0 by player Piffle-Paper  Card Killed: 1 Basket Weaver 1 0 by player Piffle-Paper  Card Attacked: 6 PASS Leader 1 2 1 by player Piffle-Paper  Card Attacked: 6 PASS Leader 3 3 1 by player Piffle-Paper  Plagiarist prestige is now 21  Using FeedBackForum Card  Using IndustrialPlacement Card  No Industrial Placement cards to use  Using PassLeader Card  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  Using EasyTarget Card  Round: 11  Drawing Cards  Plagiarist has drawn 1 Bored Rigid 2 2  Plagiarist has drawn 1 Smarty Pants 4 2  Drawing Cards  Piffle-Paper has drawn 6 PASS Leader 1 3 1  Piffle-Paper has drawn 1 Smarty Pants 4 2  Piffle-Paper chooses card: 6 PASS Leader 1 3 1  Plagiarist chooses: 1 Smarty Pants 4 2  Printing Table  Piffle-Paper cards on table:  6 PASS Leader 1 3 1  Printing Table  Plagiarist cards on table:  1 Basket Weaver 1 2  6 PASS Leader 1 2 1  6 PASS Leader 3 3 1  Using Ordinary Student Card  Card Killed: 6 PASS Leader 1 0 1 by player Plagiarist  Piffle-Paper prestige is now 0  Using Plagiarism Hearing Card  Using Course Accreditation Card  Piffle-Paper prestige is now 0  Using FeedBackForum Card  Using IndustrialPlacement Card  Piffle-Paper prestige is now 0  Using PassLeader Card  Plagiarist's PASS Leader 3 2 1 has recieved power increase of 2 points  Using ResearchFunding Card  There is no research funding cards to use  Using MitigatingCircumstances Card  There is no mitigating circumstance cards to use  Using EasyTarget Card  Piffle-Paper prestige is 0 Plagiarist prestige is 21  Plagiarist wins!  Game Over  File closed  File closed  File closed  File closed  F:\repos\UCANT-the-Widowing\UCANT THE PROGRAM NEW\UCANT\x64\Debug\UCANT.exe (process 21396) exited with code 0.  To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.  Press any key to close this window . . . |
| Copy of console output | YES |
| **Bare Pass 40% =** | | |
| Complete adherence to style guide | YES |  |
| Code commented throughout | YES |  |
| CCard class (in separate .h / .cpp file!) | YES |  |
| SProfessor structure (or class) | YES | class CPlayers  {  public:  struct SProfessor  {  string mProfName;  int mProfPrestige = 30;  };  }; |
| Correct card types read from file (for grade required) | YES | void CManager::UseResearchFundingCard(vector<shared\_ptr<CCard>> cardsDrawn, vector<shared\_ptr<CResearchFunding>> researchFunding, int randomCard, CPlayers::SProfessor& professorAttacker, string attackerName, vector<shared\_ptr<CTable>>& tableAttacker)  {  cout << "Using ResearchFunding Card" << endl;  if (cardsDrawn[randomCard]->mType == G\_RESEARCH\_FUNDING)  {  // Convert the shared\_ptr<CCard> to a shared\_ptr<CDrawCourseAccreditationCard>  shared\_ptr<CResearchFunding> pResearchFundingElement = static\_pointer\_cast<CResearchFunding>(cardsDrawn[randomCard]);  // Add the converted element to the accreditation vector  researchFunding.push\_back(pResearchFundingElement);  } |
| Console outputs for card names drawn and played, in the correct order / sequencing (for grade required) | YES | Drawing Cards  Piffle-Paper has drawn 1 Smarty Pants 4 2  Piffle-Paper has drawn 8 Mitigating Circumstances 1  Piffle-Paper chooses card: 8 Mitigating Circumstances 1 |
| Students attack enemy and reduce their prestige | YES |  |
| Final prestige and winner output to console | YES | Piffle-Paper prestige is 0 Plagiarist prestige is 21  Plagiarist wins! |
| **Third 40% +** | | |
| Collections of pointers to CCard for decks and hands | YES |  |
| CStudent class derived from CCard | YES | class CStudent :  public CCard  {  public:  }; |
| Implemented rule for sacking professor | YES |  |
| All card types read/played (but only students attack) | YES |  |
| **Lower Second 50% +** | | |
| Table implemented, with output each turn | YES |  |
| Implemented rules for cards from table attacking | YES |  |
| CPlagiarismHearing class (derived from CCard) | YES |  |
| CCourseAccreditation class (derived from CCard) | YES |  |
| Card pointers all base class pointers, not derived ptrs | YES |  |
| Over-ridden function for activating a card in each of the derived classes | YES |  |
| Attack behaviour as expected from derived classes | YES |  |
| **Upper Second 60% +** | | |
| Class diagram (consistent with implementation) | YES |  |
| CPlayer class (not SPlayer struct) | YES |  |
| CFeedbackForum class (derived from CCard) | YES |  |
| CIndustrialPlacement Class (derived from CCard) | YES |  |
| No global variables | YES |  |
| No Memory Leaks (screenshot evidence required) | YES | A screenshot of a computer screen  Description automatically generated |
| Genuine polymorphism  (no asking what type of card it is) | YES |  |
| **First 70% +** | | |
| CPassLeader class | YES |  |
| Use of typedef (or using) for vectors | YES | typedef vector <shared\_ptr<CTable>> Table; |
| Fully OO solution including Game class | YES |  |
| Smart pointers instead of new/delete | YES |  |
| Additional players | YES |  |
| **High First 85% +** | | |
| Classes for management cards (types 7 and 8) | YES |  |
| Classes for student cards (types 9, 10 and 11) | YES |  |

**UML Class Diagram**

A picture containing graphical user interface

Description automatically generated

Direct Download Link to UML Class Diagram Here:



Direct image of UML Class Diagram Here:

