* Yahtzee\_4
  + Danielle F. **Project Leader**.
  + Ismael Perez Saavedra
  + Logan Orlando
  + Amir

**List the meeting times each week, how/when you are meeting, etc......**

* **How are we’re going to meet?**
  + Danielle doesn’t mind meeting at RCC.
  + Ismael doesn’t mind meeting at RCC.
  + Logan prefers to meet via Zoom.
  + Amir prefers to meet via Zoom
* **Availability**
  + Danielle: Usually anytime
  + Ismael: Mondays after class or Fridays @10am
  + Logan: ???????
  + Amir: Fridays
* **Next meetup?**
  + March 19: Coundron coffee shop in Riverside @11am
  + March 24 @Riverside Computer Lab @10am
  + March 27 @Riverside Computer Lab @12pm
    - **Agenda:**
      * Sync up and get an update on Admin & Yahtzee classes.
      * Assign Gantt Chart to someone
      * Figure out Doxygen?
  + March 31st @Riverside Computer Lab @10am
    - **Agenda:** Sync up and get an update on Admin & Yahtzee classes.

**Timeline. What do we need to get done each week?**

* **March 19-25:**
  + Have a basic working game and try plan how we’re going to merge it with User+Admin classes (Not fully completed)
* **March 26-31:** 
  + Finish the Admin and User classes
  + Have a working scorecard class
  + Dice class to push and pull.
* **April 2-8**:
  + Merge User and Game classes
* **April 9-15:** 
  + Finish game
  + Start documentation
  + Plan our presentation
* **April 16-24:**
  + Finalize game
  + Documentation: UML, flowchart,
  + Finalize presentation

**Weekly Assignments & Responsibilities:**

**March 19 thru 24:**

* Danielle: User & Admin classes, binary files: User completed.
* Ismael: Yahtzee Play function: Dice class & basic scorecard started.
* Logan: Flowchart: Submitted 3/25.
* Amir: Score card’s look in output. Not completed. as of 3/24
* Documentation: UML chart created by Ismael

**March 25 thru 31:**

* Danielle: User & Admin classes, binary files:
* Ismael: Yahtzee Play function: get Scorecard class functioning more.
* Logan: Dice class. Make it be able to push and pull individual dice based on what dice the player wants to keep. You continue using an array or a vector. Pull Ismael’s github for dice()
* Amir: Score cards look in output. Pull Ismael’s github for scoreCard()

**March 19 Meeting Summary:**

* Danielle & Ismael attended the meeting.
* Ismael will handle the game.
* Danielle will do User+Admin Classes and then help Ismael.

**March 24 Meeting Summary:**

* Danielle & Ismael attended the meeting.
* Decided Ismael will get the game completely working with 1 player and then we’ll add a second player.
* Danielle’s github: <https://github.com/koa2019/yahtzee>
* Ismael’s Github: <https://github.com/Error1417/Yahtzee_Project>
* **Ismael’s comments:** 
  + I’ve completed the dice class and I’ve started work on the score card class. I should have the score card class and maybe a bit more complete by our next meeting.
  + UML chart added to this document.
* **Danielle’s comments:**
  + I have most of the user/admin class completed.
    - Completed 13 versions of User/Admin class.
    - Latest version has 1000+ lines of code.
  + Problem: How to connect Admin & User classes. Aggregate, inheritance, or Polymorphism?
  + Solution?: Decided to make Admin parent class and have User inherit Admin. Will move writeBinary() in Admin’s private section.
  + Problem: I’m appending each user to the files, so every time I run the program the record counter resets.
  + Solution?: add static numRecords variable in Admin class.
* **Logan:** Submitted a pic of the flowchart in Discord, but it needs to be rearranged. After each roll the game should show the player every category this roll **can potentially score**, so they can then decide if they want to keep 1 of these potential scores or switch which dice they want to keep **before** they roll again. This can be done at the end.
* **Amir:** didn’t submit anything.

**Simple UML Chart** - 3/24/23



**Pseudo:**

1. **Parent: Admin class**
   1. Dilemma. Option 1: User class will be the parent and then the Admin and Player classes will inherit User?
      1. Admin & Player both use User class’s variables & functions, but how will the Player ask Admin to test their hiScore variable?
   2. Dilemma. Option 2: Admin is the parent, list wrtBinary() as private and then User inherits Admin?
      1. Admin doesn’t need hiScore when it creates a new object for itself, but it needs to be able to reassign hiScore.
   3. Admin object:
      1. Private members:
         1. Static int num records /\* Doesn’t hold value between runs \*/
         2. unique ID
         3. name
         4. password
         5. email
         6. hiScore ? Should this be in User or Admin?
         7. readBinary()
         8. checkHiScore()
         9. setHiScore()
   4. Read inputs for 1 Admin record:
      1. Confirm inputs
      2. Save 1 admin record to object
      3. Write the object to text and binary files.
      4. Print message if successful or not
   5. ONLY Admin is allowed to read binary files
   6. Admin login()
      1. Read first record in Admin’s binary file
      2. Save it to an object
      3. Test login
      4. Print message if login was correct or not
      5. If login is correct, then allow them access to admin only functions
   7. Read User’s binary file:
      1. User login()
         1. Find a record by email
         2. Save it to an object
         3. Test login
         4. Print message if login was correct or not
         5. If login is correct, then allow them to view their profile and play game
      2. Be able to delete/edit a record or member’s of record
         1. Accept an ID or record as an object AND score from User, test if it’s bigger than their current hiSCore and update it accordingly
2. **Child: User class**
   1. Create User Class. User and game classes will have to be combined at some point.
   2. User object:
      1. Private members:
         1. Record #
         2. Unique ID
         3. name
         4. password
         5. email
         6. hiScore ? Should this be in User or Admin?
         7. scorecard[ ]
         8. dice array or vector
   3. Sign up for a new account. Read in name, email, password
      1. Confirm user inputs before saving their info to object
   4. Write and append each User to a binary file
      1. ONLY has permission to write to binary file
   5. Write and append each User’s to text file
      1. ONLY has permission to write to text file
   6. Play game as guest or as logged in user
   7. When they win they should send their ID or their record as an object AND their current score to Admin, so then Admin can test if it’s bigger than the hiScore saved to their record
3. **Game Play**
   1. **Dice** 
      1. Function returns a random num between 1 and 6
      2. Function that saves up to 5 dice in an array or vector to represent which dice the player is keeping towards their score
         1. Needs to add and remove a dice between rolls.
      3. Print the value of 1-5 different dice
         1. Test dice against 13 categories and print a score for categories player can potential get points from
            1. Ask user if they want to:

Keep one of the potential points

If yes, then turn ends and save points to scorecard

or keep 1-4 dice and roll again

If yes, get which dice they want to keep and roll the remaining dice again.

Needs to keep count of how many dice the player is keeping on each roll and the value of each dice.

* + 1. Allow user to remove dice if they still rolls remaining
       1. Consider using vectors for which dice the player is keeping between rolls?
  1. **Scorecard class:** 13 scoring categories + 3 different sums
     1. Upper Section categories
        1. 6 categories that summing each side of dice
           1. Sum function that accepts x number of dice and adds their face value?
        2. Total score from all 6 sides of a dice
        3. Bonus – if score is 63 or over, then +35 pts
        4. Total of upper section
     2. Lower Section categories: has to check if the dice meet the conditions for each of these categories. If they do, then it needs to return points.
        1. pts = three of a kind ? sum of all 3 dice : 0;
        2. pts = four of a kind ? sum of all 4 dice : 0;
        3. pts = full House (threeKind + twoKind) ? 25 pts : 0;
        4. pts = small Straight ? 30 pts : 0;
        5. pts = large Straight ? 40 pts : 0;
        6. pts = Yahtzee (5 of kind) ? 50 pts : 0;
           1. pts = Yahtzee bonus? ? 100 pts : 0;
        7. pts = chance pts = sum of all 5 dice : 0;
     3. Total of lower section
     4. Grand total = total of lower + upper section