**Team Project Sprint #2**

Report

**Team Name:** Delta

**Team Members:** Bayard Rucker, Muhammad Usman, Zeal Patel, Ergin Bostanci, Sabrina Djeddi

1. **Project Micro-Charter**

**Project name**: American Checkers Board Game by Team Delta

This project is to build a web app using an OOP language that allows users to play American checkers against each other. Our development team vision is to deliver a secure and scalable checkers game while using the agile development mythology and multiple modern technologies such as mySQL and the Django web framework.

The purpose of this project is to deliver to our product owners a well designed program and deploy a web app for users to play American checkers. Our aim is a stable application built on a modern framework allowing the dev team to learn new technologies and hone necessary soft skills that are imperative for working on dev teams and in large scale projects.

The business value for our product owners is in allowing users to play checkers as well as the flexible design of the game that will allow for new functionality and additional games to be added. The primary product owner for the project is our professor Dianxiang Xu however all other students in class are encouraged to try the app as well.

The dev team's goal is to use agile for our development mythology. There are many different ways to evaluate a team's value such as tracking K locks or the number of stories completed. The team focus is on delivery of high quality working software, getting the local Django framework running and then integrating with our mysql backend as well as getting the logic for the game engine finished. The team's biggest hurdles heading into the next sprint are a lack of testing. Like many projects, certain decisions were made with the understanding that some amount of refactoring would be needed so the team needs to be ready to integrate and refactor as well as robustly test our code. The second major hurdle is in connecting our frontend Django uI and back end game engine; however, given the robust documentation from Django, this should be a more straightforward challenge to overcome.

1. **Updated User Stories**

**NOTE: stories are pointed in terms of complexity. They are meant to be a general marker for the average developers skills of the team. While they are not a one to one mapping of time spent developing a general rule of thumb is that a 3 point story is about one fully day of development work. Given that most students don’t work full 8 hour shifts like industry. It's safe to assume a 3 point story might take a little longer in terms of development time.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **User Story Name** | **User Story Description** | **Priority** | **Estimated effort (hours)** | **Actual effort (if completed)** | **Status (completed, toDo, inProgress)** | **Developer names** |
| 1 | Flask and Django spike | As a developer I want to know if Flask or Django will be a better fit for this project | Research | 3 points | Points 3 | Done | Bayard |
| 2 | MYSQL | As a developer I want this project to have a MYSQL back end | Set up DB | Points 3 | Points 3 | Done | Sabrina |
| 3 | set up mvp for app back end | As a developer I want to have a Django back end running | Set up | Points 3 | Points3 | Done | Bayard |
| 4 | registration page view and logic | As a user I want a page I can log into or set up a new account with | Front end and db | Points 8 | Points 13 | Done | Sabrina |
| 5 | VUE research spike | Research spike | Research | No points | No points | Done | Zeal |
| 6 | Look into Django Views research spike | Research spike | Research | No points | No points | Done | Zeal & Sabrina |
| 7 | build board class | As a user I want a back-end board class | OOD class | Points 3 | Points 3 | Done | Bayard &Usman |
| 8 | build game class | As a user I want a back-end game engine | OOD class | Points13 | points13 | Done | Usman |
| 9 | evaluate communication channels | Research spike | Research | No points | No points | Done | Zeal |
| 10 | build piece class | As a user I want a back-end pieces class | OOD class | Points 3 | Points 3 | Done | Usman |
| 11 | transfer prototype into Django | As a user I want the prototype UI transfer to the Django app | Transfer | Points 5 |  | Done | Zeal |
| 12 | build player class | As a developer I want to have a class to track active players | OOD design | Points 3 |  | Done | Ergin  Sabrina  Bayard |
| 13 | add testing library | As a developer I want a centralized testing library | Testing | Points 2 | Points 2 | Done | Bayard |
| 14 | connect board to front end UI | As a user I want a UI page on which the game will be played | UI | Points 3 | Points 3 | Done | Bayard |
| 15 | change Django view functions to classes | Change view functions into classes | Refactor | Points 3 |  | Done | Sabrina |
| 16 | add rules page | As I user I want a page where I can see the game rules | UI | Points 3 |  | Done | Bayard |
| 17 | Player stats | As a user I want to see player statistics | UI | Points 3 |  | To do |  |
| 18 | Unit testing for game class | As a developer I want unit testing for the game class | Test | Points 2 |  | Done | Zeal |
| 19 | Routing defect | As a user I want the routing fixed | UI | Points 1 |  | Done | Zeal |
| 20 | Game integration | as a user I want to game engine to connect to the front end board | Integration | Points 5 | This story is no longer needed | To do |  |
| 21 | Added channels for communication | As a user I want communication channels working | Back end | Points 5 |  | Done | Zeal |
| 22 | Game end | As a player I want to see when game ends | UI | Points 2 |  | Done | Zeal |
| 23 | Connect channels and websockets | As a developer I want Testing and trying out CHAT app in Django to learn channels and WebSockets for connecting part | UI | Points 5 |  | Done | Zeal |
| 24 | Move pieces | As a user I want the piece to move function to frontend | UI | Points 2 |  | Done | Zeal |
| 25 | Moving functions | As a developer I want Added messaging functionality with the move is executed. | UI | Points 3 |  | Done | Zeal |
| 26 | Front in fix | Finalize elements of dictionary/json object which is going back and forth | UI | Points 2 |  | To do |  |
| 27 | Change board | As a user I would like to change board orientation (default is dark side at the bottom). | UI | Points 1 |  | To do |  |
| 28 | Testing | As a dev I want to Add unit test for board class | Testing | Points 3 |  | In progress | Zeal |
| 29 | Integration | As a dev I want a data format conversion function to the front end. | Integral | Points 3 |  | Done | Zeal |
| 30 | Back end updated | As a dev I want Adding Session to a game | Back end | Points 3 |  | Done | Usman |
| 31 | Turns | As a user, the player wants to see whose turn it is. | UI | Points 2 |  | Done | Zeal |
| 32 | Web socket update | As a user, I want to reconnect to WebSocket automatically without refreshing the page. | UI | Points 3 |  | In progress | Zeal |
| 33 | Back end updated | As developer, I want to run Redis server for messaging automatically when runserver is executed | Backed | Points 2 |  | Done | Zeal |
| 34 | Network issues | As a user I want to know when my game has some network issues. | UI | Points 2 |  | Done | Zeal |
| 35 | Board update | As developer boards need to be updated continuously in order to get synced with other open tabs. | UI | Points 3 |  | Done | Zeal |
| 36 | Backend update | As a developer I want a player object created with a user logs in | Backend | Points 3 |  | In progress | Bayard |

1. **Updated Acceptance Criteria (AC)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User Story ID and Name** | **AC**  **ID** | **Description of Acceptance Criterion** | **Status (completed, toDo, in Progress)** | **Developer Names** |
| 1 Flask and Django spike | 1.1 | Given the two different frameworks we are looking into. When a dev has Research them and then presents the finding to the team | Done | Bayard |
| S:2 MYSQL | 2.1 | Given a mySQL db when the app starts up then it should Connect MYSQL to Django app | Done | Sabrina |
| S:3 set up mvp for app back end | 3.1 | Given a framework has been selected for S:1 when a dev starts working on the app then a base django app should be running | Done | Bayard |
| S:4 registration page view and logic | 4.1 | Given a Registration page renders. When a user goes to the app to register then they should be router to the new page. | Done | Sabrina |
|  | 4.2 | Given a user uses the Registration page when a user uses the page then it should connects to DB and Django app | Done | Sabrina |
|  | 4.3 | Given Sign in page renders when a user arrives at the app then the user should be able to sign up or sign up. | Done | Sabrina |
|  | 4.4 | Given Sign up page connects to the DB then a user should be able to sign in when there credentials are verified with the DB and re routs to home page | Done | Sabrina |
| S:5 VUE research spike | 5.1 | Given the different approaches we are looking into. When a dev has Research them and then presents the finding to the team | Done | Zeal |
| S:6 Look into Django Views research spike | 6.1 | Given the different approaches we are looking into. When a dev has Research them and then presents the finding to the team | Done | Zeal, Sabrina |
| S:7 build board class | 7.1 | Given a new game when board class is called then it should generate a board data structure | Done | Bayard & Usman |
|  | 7.2 | Given the board class exist then a dev should Add basic read and write when board attributes need to be accessed | Done | Bayard |
|  | 7.2 | Given a board class then a dev should Add unit test when all the other functions have been built | Done | Bayard |
| S:8 build game class | 8.1 | Given a new game then a user should then a user should use the back end game class that rules game logic when playing the game | Done | Usman |
|  | 8.2 | Given a board class then a dev should Add unit test when all the other functions have been built. Unite testing for this story has been reassigned to story S:18 | To do | Usman |
| S:9 evaluate communication channels | 9.1 | Given the different approaches we are looking into. When a dev has Research them and then presents the finding to the team | Done | Zeal & Usman |
| S:10 build piece class | 10.1 | Given a new game then a user should use the back end pieces class that rules pieces logic when playing the game | To do | None |
|  | 10.2 | Given the pieces class exist then a dev should Add basic read and write functions when pieces attributes need to be accessed | To do | None |
|  | 10.3 | Given a pieces class then a dev should Add unit test when all the other functions have been built | To do | None |
| S:11 transfer prototype into Django | 11.1 | Given that a lot of UI code has been written then a dev should See what code can be ported over to Django app When it would be more advantages that rewriting it. | Done | Zeal |
| S:12 build player class | 12.1 | Given a new player then a user should use the back end pieces class that rules pieces logic when playing the game | Done | Ergin  Sabrina  Bayard |
|  | 12.2 | Given the player class exist then a dev should Add basic read and write functions when player attributes need to be accesses | Done | Ergin  Sabrina  Bayard |
|  | 12.3 | Given a player class then a dev should Add unit test when all the other functions have been built | Done | Ergin  Sabrina  Bayard |
| S:13 add testing library | 13.1 | Given a centralized testing library is needed then a dev should Integrate Pytest with Django when the .venv in running | Done | Bayard |
| S:14 connect board to front end UI | 14.1 | Given that multiple page now render then a user should be able to navigate to the game page when they have logged in | Done | Bayard |
|  | 14.2 | Given a user in on the game page then the user should see a black page has loaded when they navigate to the page | Done | Bayard |
| S:15 change Django view functions to classes | 15.1 | Given that some view functions are not classes then a dev should rewrite them when the are not classes | Done | Sabrina |
|  | 15.2 | Given that multiple page now render then a user should be able to navigate to all page when they have logged in | Done | Sabrina |
| S:16 add rules page | 16.1 | Given a user is logged in then the user should see the game rules when the navigate to the rules page | Done | Bayard |
| S:17 add player states page | 17.1 | Given a user is logged in then the user should see there player stats when the navigate to the stats page | To do | None |
| S:18 unit testing for game class | 18.1 | Write unit test for game class this story is downstream from s:8 Given a board class then a dev should Add unit test when all the other functions have been built. | Done | Zeal |
| s:19 routing defect | 19.1 | Given a user is trying to reroute to a different page the routing should work properly | Done | Zeal |
| S:20 as a user I want to game engine to connect to the front end board | 20.1 | Given a user is log in they should be able to play a game using the backend logic | To do |  |
| s:21 Added channels for communication | 21.1 | Given the app is running the communication channels should be working | Done | Zeal |
| S:22 As a player I want to see when game ends | 22.1 | Given a usr has won there should be a prompt showing a winner | Done | Zeal |
| s:23 As a developer I want to Testing and trying out CHAT app in Django to learn channels and WebSockets for connecting part | 23.1 | Given the app is running there should be a connection to web sockets | Done | Zeal |
| s:24 added piece move function to frontend | 24.1 | Given a user is playing a game. There should be pieces moving using backend logic | Done | Zeal |
| s:25 Added messaging functionality with the move is executed. | 25.1 | Givne a user has made a move there should be messaging to the back end game engine | Done | Zeal |
| s:26 Finalize elements of dictionary/json object which is going back and forth | 26.1 | Giving the app is running there is be a finalized method for passing information | To do |  |
| s: 27 As the game player would like to change board orientation (default is dark side at the bottom). | 27.1 | Given a user wants to change the UI there should be an option to have a dark theme | To do |  |
| s:28 Add unit test for board class | 28.1 | Given the board class is create there should be unit test written for this class | To do | Zeal |
| s:29 Added data format conversion function to the front end. | 29.1 | Given the app is running there should be data conversion from front end to back end | Done | Zeal |
| s:30 Adding Session to a game | 30.1 | Giving a user is starting a game there should be a session instance created | Done | Usman |
| s:31 As game player want to see whose turn it is. | 31.1 | Given the player made the right move when the player clicks on the target location of the board then the attribute of the game object called turn is switched to the opposite player. i.e. game.turn == (opposite color) | Done | Zeal |
|  | 32.2 | Given the player made an incorrect move when the player clicks on the target location of the board then the attribute of the game object called turn remains unchanged. | Done | Zeal |
| s:32 As a user want to reconnect to WebSocket automatically without refreshing page. (sprint 3) | 32.1 | Given a user is playing and get disconnected there should be an automatic reconnecting | To do | Zeal |
| s:33 As developer, I want to run Redis server for messaging automatically when runserver is executed. | 33.1 | Given Redis is not running when Django runserver is executed then execute docker command to start Redis. | done | Zeal |
|  | 33.2 | Given Redis is running when Django runserver is executed then check if Redis is running using docker library in python and print out that Redis is already running. | Done | Zeal |
| s:34 As player want to know when my game has some network issue. | 34.1 | Given WebSocket closed unexpectedly, when an error has occurred in client network then hide board and show red-colored text telling the user that error has occurred. | Done | Zeal |
|  | 34.2 | Given WebSocket closed unexpectedly, when an error has occurred in the server-side network then hide board and show red-colored text telling the user that error has occurred. | Done | Zeal |
| s:35 As developer boards need to be updated continuously in order to get synced with other open tabs. | 35.1 | Given a user is playing there should be constant updates to the board when a game is being player | Done | Zeal |
| s:36 As a developer I want a player object created with a user logs in | 36.1 | Given a user has logged in the back in should created an instance of the player class for that user | In progress | Bayard |

1. **Updated Implementation Tasks**

Include the tasks from the previous report and highlight the new tasks with a different color.

Summary of production code

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Story ID and Name** | **AC ID** | **Class Name(s)** | **Method Name(s)** | **Developer Name(s)** | **Status** | **Notes (optional)** |
| S:3 set up MVP for app back end | 3.1 | Code generated in app set up | Code generated in app set up | Bayard | Done |  |
| S:2 MYSQL | 2.1 | DB connects to app |  | Sabrina | Done |  |
| S:4 registration page view and logic | 4.1 | HTML page |  | Sabrina | Done |  |
|  | 4.2 | Used Django models |  | Sabrina | Done |  |
|  | 4.3 | Html page |  | Sabrina | Done |  |
|  | 4.4 | Used dragon models |  | Sabrina | Done |  |
| S:8 build game class | 8.1 | Moving errors  State | ner()  move()  Errors  did\_end()  simple\_move()  jump\_avaialbe()  farther()  pieces\_after\_simple\_moce()  Piece\_after\_jump() | Usman | Done | This story has multiple class and functions and has stories for refactor and adding unit testing |
| S:9 evaluate communication channels | 9.1 |  |  | Zeal | Done |  |
| S:13 add testing library | 13.1 | Integration with Django running Pytest in .venv run successfully |  | Bayard | Done |  |
| S:14 connect board to front end UI | 14.1 | Html page renders |  | Bayard | Done |  |
| This is the beginning of sprint 2 implementation task |  |  |  |  |  |  |
| S:12 build player class | 12.1 | Player class | \_\_init\_\_  new\_game()  get\_name()  get\_email()  is\_acitve()  player\_color()  player\_pieces()  change\_activity()  color\_change()  Picece\_change()  game\_reset()= | Ergin  Sabrina  Bayard | Done |  |
| S:15 points 3 change django view functions to classes | 15.1 | classe’s  Signupview()  loginview()  logoutview()  rulesview()  playerstatsview()  game() | post()  —  post()  ——  get()  ——  get()  ——  get()  ——  get()  room()  create\_game()  join\_game()  resume\_game() | Sabrina , Zeal | Done |  |
| S:16 add rules page | 16.1 | Html renders |  | Bayard | Done |  |
| s:18 unit testing for game class | 18.1 | none | test\_game\_build()  test\_game\_change\_turn()  test\_game\_functions() | Zeal | Done |  |
| s:19 routing defect | 19.1 | Routing works correctly |  | Zeal | Done |  |
| s:21 Added channels for communication | 21.1 | Back end channels run |  | Zeal | Done |  |
| S:22 As a player I want to see when game ends | 22.1 | Html notice renders |  | Zeal | Done |  |
| s:23 As a developer I want to Testing and trying out CHAT app in Django to learn channels and WebSockets for connecting part | 23.1 | Backend web sockets work |  | Zeal | Done |  |
| s:24 added piece move function to frontend | 24.1 | Backend to front end connection |  | Zeal | Done |  |
| s:25 Added messaging functionality with the move is executed. | 25.1 | Back end channels run |  | Zeal | Done |  |
| s:29 Added data format conversion function to the front end. | 29.1 | Data is properly formatting for conversion |  | Zeal | Done |  |
| s:31 As game player want to see whose turn it is. | 31.1 | Html renders |  | Zeal | Done |  |
| s:33 As developer, I want to run Redis server for messaging automatically when runserver is executed. | 33.1 | Backend update |  | Zeal | Done |  |
| s:34 As a player, I want to know when my game has some network issues. | 34.1 | Html renders |  | Zeal | Done |  |

Summary of automated test code (directly corresponding to some acceptance criteria)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Story ID and Name** | **Acceptance Criterion ID** | **Class Name (s) of the Test Code** | **Method Name(s) of the Test Code** | **Description of the Test Case (input & expected output)** | **Status** | **Developer Name(s)** |
| S:12 build player class | 12.1,12.2,12.3 | Using pytest not specific classes | test\_player\_build()  test\_player\_new\_game()  test\_player\_get\_functions()  test\_player\_reset() | player\_build test that the class is being built correctly.  new\_game test that once a player starts a game they attributes are updated correctly  get\_functions()  Test the return values of the getter functions  reset()  Is a test to reset the player after a game | Done | Ergin  Sabrina  Bayard |
| S:18 unit testing for game class | 18.1 | Pytest does not need a class | test\_game\_build()  test\_game\_turn()  test\_game\_functions()  test\_game\_chekc\_end\_game() | Test the game is building correctly  Function are rusting properly,  Turns are not being violated  And end game status is returning correctly | Done | Zeal |

Summary of manual test cases (directly corresponding to some acceptance criteria)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Story ID and Name** | **Acceptance Criterion ID** | **Test Case Input** | **Test Oracle (Expected Output)** | **Status** | **Notes** | **Developer Name(s)** |
| S:3 set up MVP for app back end | 3.1 | App runs in dev env |  | Done |  | Bayard |
| S:2 MYSQL | 2.1 | Check read and writes in DB |  | Done |  | Sabrina |
| S:4 registration page view and logic | 4.1 | Page renders |  | Done |  | Sabrina |
| S:8 build game class | 8.1 | Game is playable from command line |  | Done |  | Usman |
| S:14 connect board to front end UI | 14.1 | Page renders |  | Done |  | Bayard |

Summary of other automated or manual tests (not corresponding to the acceptance criteria)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Number** | **Test Input** | **Expected Result** | **Class Name of the Test Code** | **Method Name of the Test Code** | **Status** | **Developer Name(s)** |
| 1 | Click on ‘Create Game button’ | Generate a unique 16 character alphanumeric string and save it to the database as a game id. Also add player username (who created game) in player1 field | Class game(view); | create\_game() | Test successful | Zeal |
| 2 | Click join button after selecting game for radio list | Get game record from game\_session table and add username in player2\_username field | Class game(view) | join\_game() | Test successful | Zeal |
| 3 | Click resume button after selecting game for radio list | Redirect request to room method after appending game\_id to /game/ link | Class game(view) | resume\_game() | Test successful | Zeal |

1. **Meeting Minutes**

Report the minutes of all meetings, including, but not limited to: project/sprint planning meeting, stand-up meeting, backlog grooming, retrospective meeting, and pair programming session.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Time and Duration** | **Place** | **Participant Names** | **Purpose of the Meeting** | **Specific Action Items** |
| 8/27 | 45 min | Zoom | Bayard, Zeal, Sabrina | Team formation | Set up base team. Talked about possible approaches and high-level details like languages |
| 8/27 | 45 min | In person | Bayard, Ergin | Team formation | Set up base team. Talked about possible approaches and high-level details like languages |
| 8/30 | 1.5 hours | Zoom | Full team | First team meeting | Introductions, talked about high-level project requirements, set up Trello board and added initial stories, set up GIT repo |
| 9/6 | 1 hour | Zoom | Full team | Week meeting time | Checked in on everyone progress. Added a few stories. Decided to use Django as main framework and MYSQL as DB |
| 9/13 | 2 hours | Zoom | Full team | Week meeting time | Weekly meeting decided not to use VUE for the front end. Base app set up |
| 9/20 | 1.5 hours | Zoom | Full team | Week meeting time | To be more agile we followed agile practices listed in meeting agenda doc added testing library, walked thru UI updates and how Django connects to MYSQL |
| 9/20 | 1 hour | In person student union | Bayard, Ergin | Paired programming | Talking about project overview and worked on local set up for MYSQL and setting up player class |
| 9/27 | 2 hours | Zoom | Full team | Week meeting time | Followed agenda doc. Talked about implemented stories and board class focused on OOP and unit testing |
| 10/4 | 1 hour | Zoom | Full team | Week meeting time | Focused on updating routing and UI. Added and pointed new stories. |
| 10/8 | 45 min | Zoom | Bayard,  Usman | Code review | Review of game class and talk about next steps |
| 10/16 | 30 minutes | Zoom | Full team | Demo review | Talked about spring one report and planning for sprint 2 |
| 10/18 | 45 min | Zoom | Full team | Weekly meeting | Spring 2 planning and backlog refinement |
| 10/25 | 30 min | Zoom | Full team | Weekly meeting | Stand up and weekly check in meeting |
| 10/29 | 1 hour | Zoom | Full team | Working session | Everyone worked on assigned stories |
| 11/1 | 45 min | Zoom | Full team | Weekly meeting | Backlog refinement and stand up and planning |
| 11/8 | 45 min | Zoom | Full team | Week meeting time | Stand up, troubleshooting defects and code updates |
| 11/15 | 30 minutes | Zoom | Full team | Week meeting time | Stand up working on sprint 2 report |

1. **Buddy Ratings**

If you don’t feel comfortable to include your ratings in this report, you may email your ratings to the instructor or grader.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Rating giver* | *Rating receiver* | | | | |  |
|  | Bayard Rucker | Muhammad Usman | Zeal Patel | Ergin Bostanci | Sabrina Djeddi |
| Bayard Rucker | X | 1 | 1 | 1 | 1 |
| Muhammad  Usman | 1 | X | 1 | 1 | 1 |
| Zeal Patel | 1 | 1 | X | 1 | 1 |
| Ergin Bostanci | 1 | 1 | 1 | X | 1 |
| Sabrina Djeddi | 1 | 1 | 1 | 1 | X |
|  | ***Average*** | **1** | **1** | **1** | **1** | **1** |