



SCRUMBOT

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Background

- Discord is a voice and text chat application targeted at video game communities, but recently it has branched out for groups outside of just video games (e.g. software development teams)
- A Discord bot is a specialized chat bot that runs on the Discord application
- Original Project Source: Code-Plus-Plus' Discord Meeting Bot



DISCORD



Background

- Scrum is an agile process framework widely used in industry for managing and coordinating collaborative projects
- Highly iterative process and often has heavy customer involvement
- Encourages team members to self-organize and reflect on progress during Scrum process



Background

Roles in Scrum:

- Scrum Master
 - Facilitator, encourages self-organization and communication from development team
 - Manages the process for how information is exchanged
- Business Analyst
 - Responsible for understanding requirements and identifying solutions
 - Communicate with product owner(s)
- Development Team
 - Develop and deliver requested product increments



Purpose & Scope

- Direct management of Scrum Agile process directly integrated into the communication channel
- Allow for better organization of Scrum meetings and improve efficiency within the communication channel
 - i.e. Retrospectives, stand-up, grooming, sprint planning meetings



Discussion

Changes from original project:

- Change codebase from Javascript to Python
- Original project only had function to schedule meetings
- New features:
 - Role restricted commands
 - Specify Scrum specific meeting types
 - Abilities to add sprints for Scrum iterations
 - Tasks within Scrum iterations
 - Meetings, sprints, tasks organized by projects
 - Ability to add requirements to projects
 - Encourage team reflection through ability to add feedback

Demo

Now, we'll move onto the demonstration...





Quality

- Usability
 - Intuitive user commands & help menu
- Maintainability
 - Adequately documented, well-structured code
 - Modularized code & information hiding
 - Intuitive and relevant naming & style guide
- Robust
 - Handling of incorrect commands
 - Error handling



Test Coverage

- 78% Statement Coverage
- Exception Testing
- Boundary Testing
- Manual Testing

Coverage report: 78%

Module ↓	statements	missing	excluded	coverage
src/dict.py	21	0	0	100%
src/fileio.py	147	147	0	0%
src/meeting.py	23	0	0	100%
src/meetingList.py	4	0	0	100%
src/meetingTypes.py	18	0	0	100%
src/project.py	139	0	0	100%
src/projectList.py	3	3	0	0%
src/scrumbot.py	20	20	0	0%
src/sprint.py	62	0	0	100%
src/task.py	26	0	0	100%
src/taskList.py	4	0	0	100%
src/test.py	301	0	0	100%
Total	768	170	0	78%

coverage.py v5.0.4, created at 2020-04-02 11:33



Conclusion

ScrumBot is an effective tool for managing the Scrum Agile process directly within the communication channel (i.e. Discord)

Special Features:

1. Ability to add and update feedback for tasks
2. Ability to add and store projects, sprints, and tasks
3. Ability to add meetings
4. Ability to update and add requirements to a project
5. Commands are restricted by roles