

# RewardBot - Demo HokieTechies

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# Problem Statement

What?

- Not able to quantify good quality work
- Lack of motivation to do good quality work
- Missing actionable objectives
- Lack of recognition

Motivation?

- "Quiet Quitting" and "The Great Resignation"
- Growing discontent
- Identify top performers
- Foster a healthy work culture

# Proposed Solution - RewardBot

## Features:

- Slack Bot that provides reward points
- Leaderboard
- External Integration - GitHub

## Utility:

- Provides recognition for hard workers
- Provides tangible rewards for good quality work
- Promotes healthy competition which in turn drives up productivity
- Fosters a healthy work culture that keeps people content
- Helps the company identify and retain top performers

# Points Reward System

# Use Case

**Use Case:** Manually Awarding Points to Peers

**Preconditions:**

- The employee must have the necessary authorization to use the RewardBot.
- The employee should not have used the RewardBot to award points more than three times.

**Main Flow:**

The employee will input the award details, such as the recipient's name, the type of award, and the reason for giving the award, using the appropriate slash command [S1]. The RewardBot will verify the response and save the points in the database [S2]. The RewardBot will send a private message to the awarder confirming the award details[S3].

**Subflows:**

[S1] The employee triggers the RewardBot using the `/reward` slash command, and the bot will prompt them to input the recipient's name, the type of award, and the reason for the award.

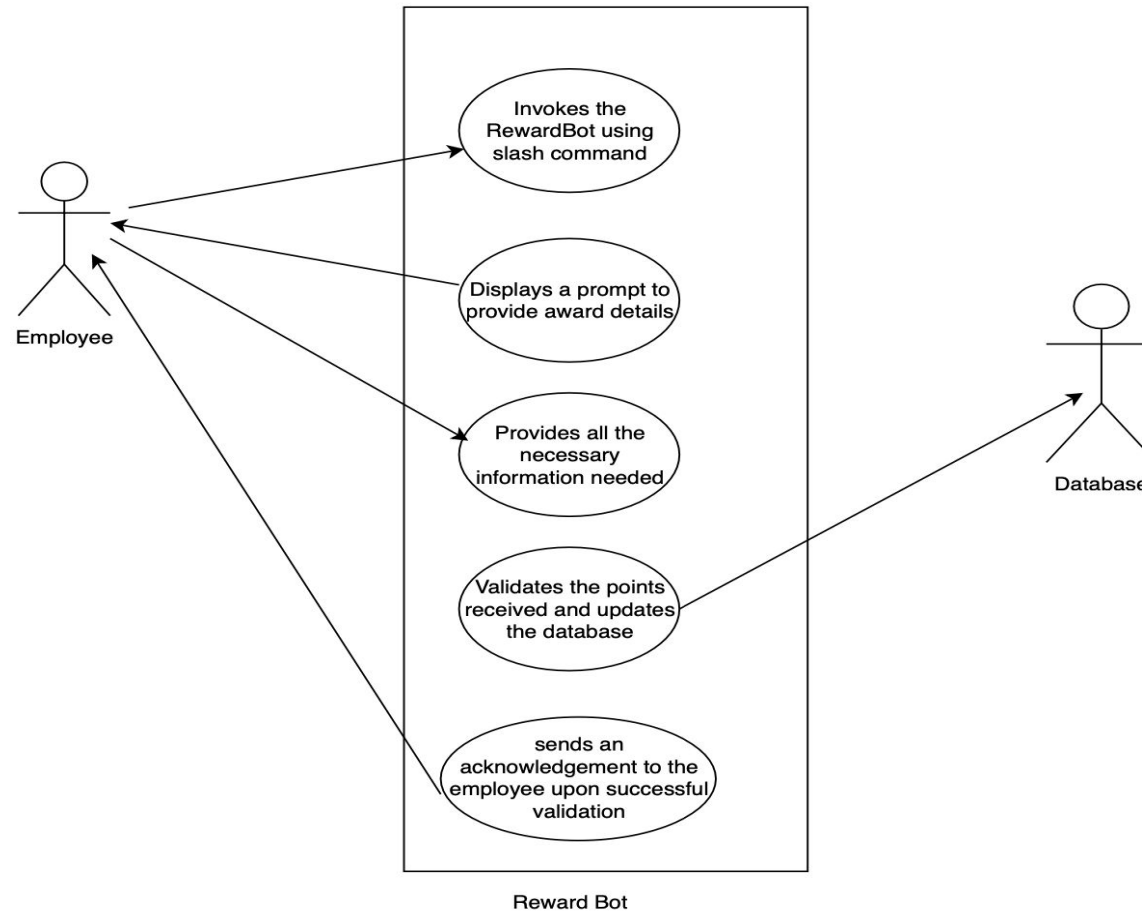
[S2] The RewardBot will validate the response and update the recipient's points if the validation is successful.

[S3] The RewardBot will send a message with the award details to the public dedicated bot channel.

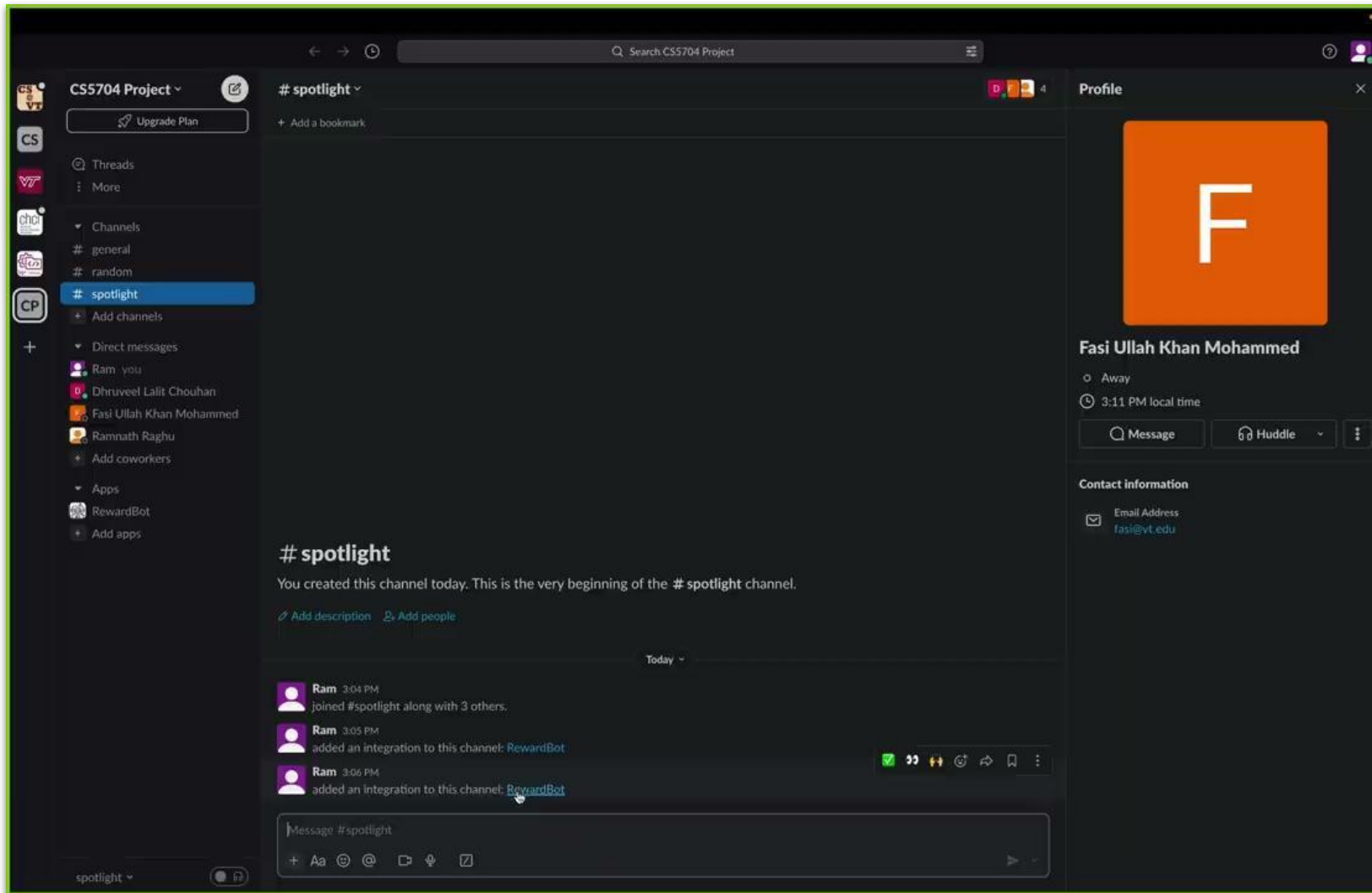
**Postconditions:**

- - The recipient's record is updated with the awarded points.
- - The awarder-to-awardee quarterly award count increases by one. (Only three awards can be given by a specific awarder to a specific awardee in a quarter)

# User Diagram



# Demo



# Leaderboard



# Use Case

**Use Case:** Display the leaderboard showing the name of the top ten performers and their accumulated points.

**Preconditions:**

1. The employee should have the necessary permissions to interact with the bot.
2. There should be valid entries in the database of the respective employees and their details.

**Main Flow:**

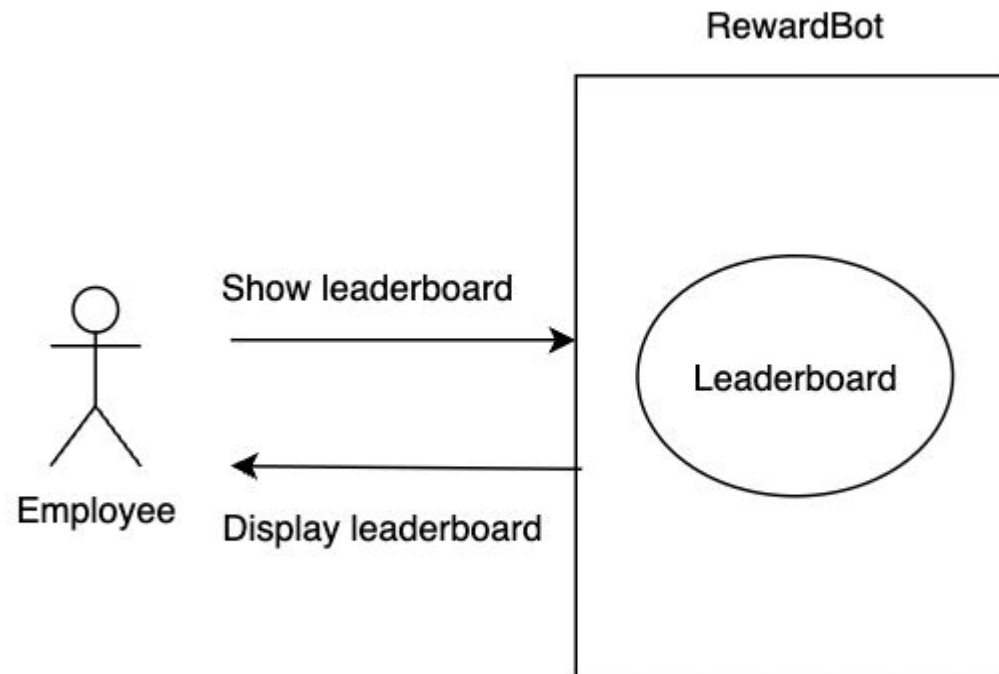
The employee will invoke a slash command, triggering the Reward Bot [S1]. The Reward Bot will then show the leaderboard to the employee on a private channel [S2].

**Sub Flow:**

[S1] Employee invokes the bot using the `/leaderboard` slash command.

[S2] The bot then sends a direct message containing the leaderboard of the top ten performers to the employee who invoked the command.

# User Diagram



# Demo

The screenshot displays a Slack workspace for 'CS5704 Project'. The left sidebar shows the channel list with 'CS5704 Project' selected. The main view shows a message from 'RewardBot' titled 'Leaderboard' with a trophy icon. The message contains two lists of users and their point counts. The first list shows users with 0 points, and the second list shows users with 100, 25, and 0 points. The right sidebar shows the profile of 'Fasi Ullah Khan Mohammed' with an orange profile picture featuring a white 'F' and contact information.

**CS5704 Project**

Upgrade Plan

Threads  
More

Channels

- # general
- # random
- # spotlight
- Add channels

Direct messages

- Ram you
- Dhruveel Lalit Chouhan
- Fasi Ullah Khan Mohammed
- Ramnath Raghu
- Add coworkers

Apps

- RewardBot
- Add apps

**RewardBot**

Messages About

Kamaraja Ramanujan - 0 points

Today

Dhruveel Lalit Chouhan - 0 points

4. Ramnath Raghu - 0 points

5. Fasi Ullah Khan Mohammed - 0 points

**RewardBot** APP 3:14 PM  
**Leaderboard** 🏆

🥇 Dhruveel Lalit Chouhan - 100 points

🥈 Fasi Ullah Khan Mohammed - 25 points

🥉 Dummy User - 0 points

4. Ramaraja Ramanujan - 0 points

5. Ramnath Raghu - 0 points

**RewardBot** APP 3:21 PM  
**Leaderboard** 🏆

🥇 Ramaraja Ramanujan - 150 points

🥈 Dhruveel Lalit Chouhan - 100 points

🥉 Shaunak Juvekar - 75 points

4. Ramnath Raghu - 50 points

5. Fasi Ullah Khan Mohammed - 25 points

6. Dummy User - 0 points

Message RewardBot

+ Aa @ 📎 🔍

**Profile**

**Fasi Ullah Khan Mohammed**

Away

3:25 PM local time

Message Huddle

**Contact information**

Email Address  
fasi@vt.edu

# External Integration - GitHub

# Use Case

**Use Case:** Integrating our RewardBot with GitHub

**Preconditions:**

1. The employee should be present in the database.
2. The employee should have raised a PR.

**Main Flow:**

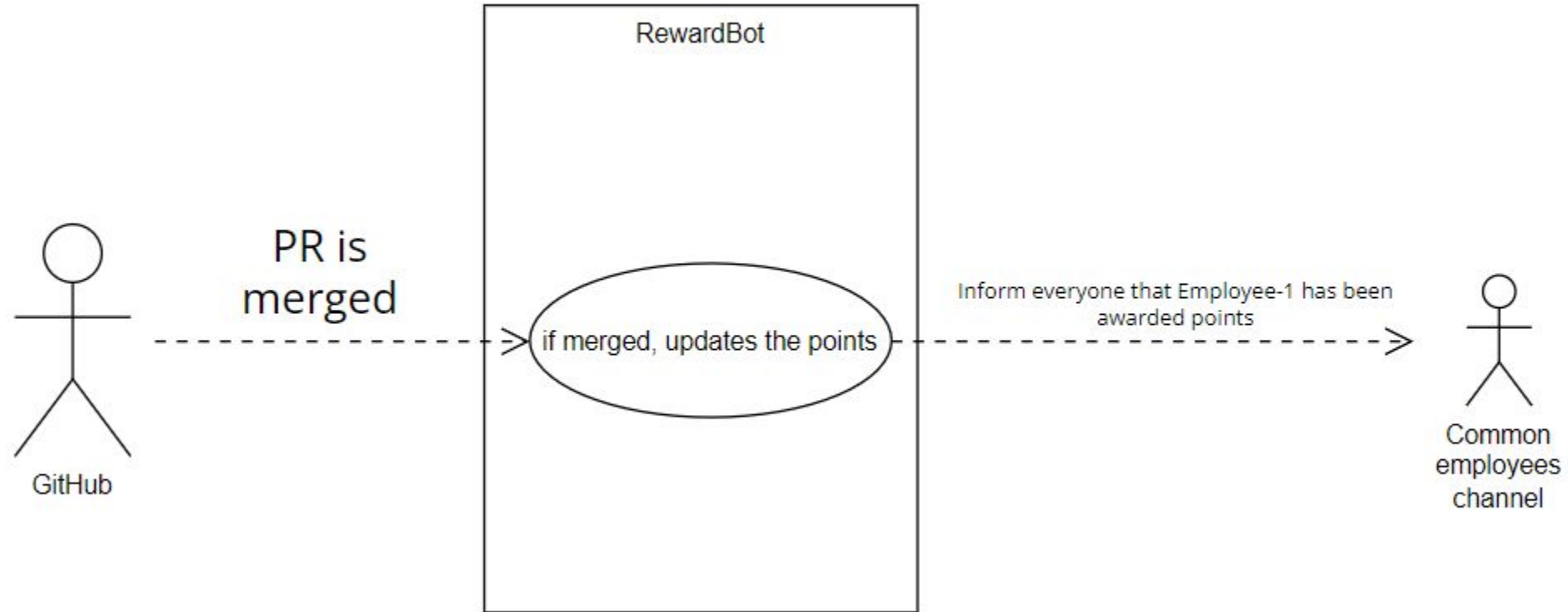
The bot will award the points to the employee who raised the PR once it is merged[S1]. The bot will also post a message on the common channel and inform everyone about the awarded points[S2].

**Subflows::**

[S1] Once the PR is merged, it automatically awards points to the employee and will update the database

[S2] It will post a message on the Slack channel saying Employee ABC has been awarded 10 points for their contribution.

## User Diagram



# Demo

The screenshot shows a GitHub pull request interface. At the top, the browser address bar displays `github.com/r-ramaraja/bookish-meme/pull/12`. The repository name `r-ramaraja / bookish-meme` is visible, along with buttons for `Unwatch`, `Fork`, and `Starred`. The navigation bar includes links for `Code`, `Issues`, `Pull requests` (which is active), `Actions`, `Projects`, `Wiki`, `Security`, `Insights`, and `Settings`.

The main heading of the pull request is `Revert "Revert "Create bar.txt"" #12`. Below it, a green button labeled `Open` indicates that `r-ramaraja` wants to merge 1 commit into `master` from `add-bar`. A summary bar shows `Conversation` (0), `Commits` (1), `Checks` (0), and `Files changed` (1), with a net change of `+0 -0`.

A comment from `r-ramaraja` states: "This reverts commit #15762b". Below the comment, the commit hash `278bd86` is shown. A message instructs the user to "Add more commits by pushing to the `add-bar` branch on `r-ramaraja/bookish-meme`".

The pull request status is detailed in a box on the left: 

- Require approval from specific reviewers before merging**: Branch protection rules ensure specific people approve pull requests before they're merged. (Add rule)
- Continuous integration has not been set up**: GitHub Actions and several other apps can be used to automatically catch bugs and enforce style.
- This branch has no conflicts with the base branch**: Merging can be performed automatically. (Indicated by a green checkmark)

 A green button `Merge pull request` is at the bottom of this box, with a note: "You can also open this in GitHub Desktop or view command line instructions."

On the right side, there are configuration sections for `Reviewers` (No reviews), `Assignees` (No one—assign yourself), `Labels` (None yet), `Projects` (None yet), `Milestone` (No milestone), and `Development` (Successfully merging this pull request may close these issues).

At the bottom, there is a `Write` section with a `Preview` button and a `Leave a comment` field. A `Notifications` section at the bottom right shows an `Unsubscribe` button and a message: "You're receiving notifications because you're watching this repository."

## └ Limitations

- Available only on Slack
- Only one external integration i.e. Github
- As effective as the frequency of the user interactions
- Lack of user study



## Future Work

- Further external integrations such as JIRA, Salesforce, StackOverflow, etc.
- Improve gamification - adding levels and badges
- Rules - manager approves the peer-to-peer rewards
- Leaderboard 2.0 - metrics and visualizations
- Customizability - to tailor according to the organization's culture
- Points Redemption - exchange points for rewards

# Lesson Learnt

What went well?

- Develop an app end-to-end from scratch
- Collaboration as a team
- Usage of tools for Software Engineering

What did not go well?

- Time management
- Learning curve
- Cloud deployment

Thank You!  
Questions?