# PR Status API Tool

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# Introduction

## What is a PR

- Pull request(PR) contains code level changes implemented in the local environment of the user, for fixing bugs across many versions of CRM application
- These changes need to be pushed to Server for the fix to be effective in the application

## What are the current challenges

- If the Build of the PR doesn’t succeed then the changes do not get pushed. Hence they need to be monitored regularly and steps need to be taken if they fail or expire.
- This process manually takes a long time and decreases the efficiency of the workforce. Hence there arises a need for automated tool to perform this task

# Overview

## How the tool works

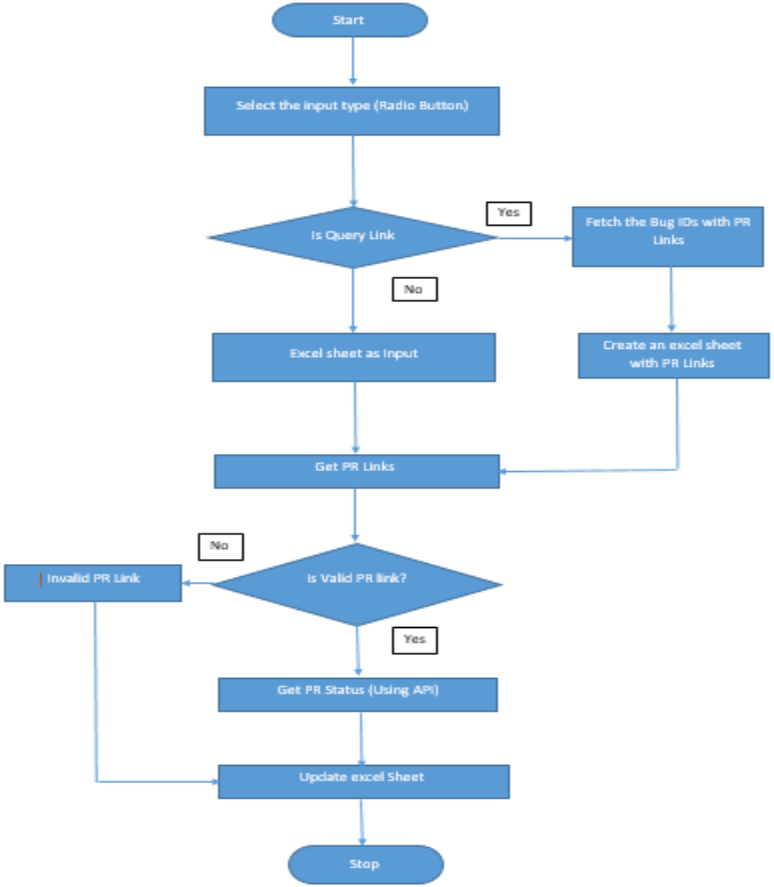
- The Pull Request Status tool is created to automate the process of getting the PR status(Abandoned/Completed/Active) from the pull requests and update the excel sheets accordingly
- This tool takes input in two ways. One is in the form of excel sheets with predefined schema, containing PR URLs. And other is TFS Query Link.
- If user enters query link, tool creates a new excel sheet with BugIds and corresponding PR Links and PR status of that particular query link. And this newly created excel file will be saved file path provided by the user.
- If user enters excel sheet with Bug IDs and PR Links on Completion the tool updates the input file by appending the build status against each PR.

# Business Benefits

## Advantages of using the tool along with effort and time savings

- Average time taken for Manual checking of status in TFS
- PR Status = 2 minutes
- If a bulk port is having 100 PRs then the average effort taken by the FTE = 100 * 2.5 minutes = 4.2 person hours
- PR Status API tool will be able to do the same in less than one minute for a PR
- This tool gives the status of the build against each PR thus by simplifies the status reporting.

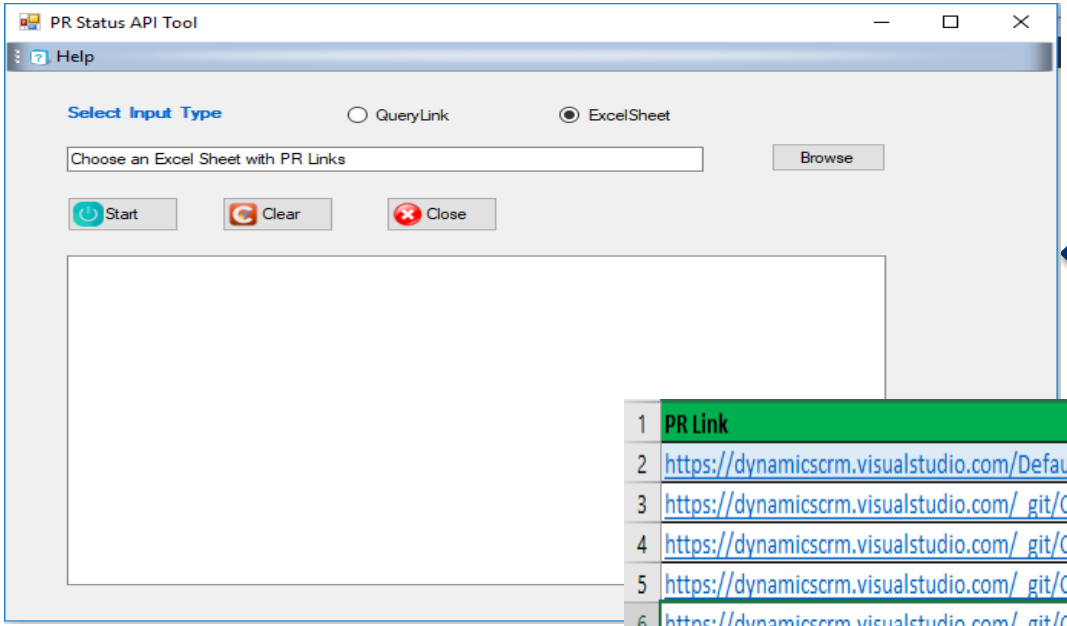
# Workflow diagram




## Expected PR status:

- Abandoned
- Active
- Completed

# Tool Demo

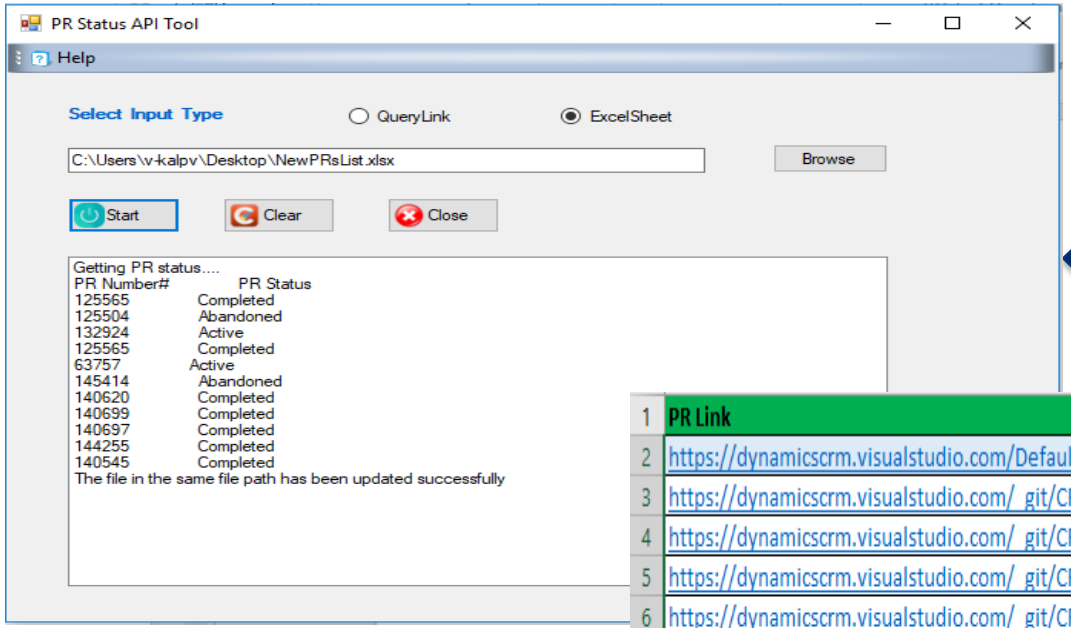



User Interface

User Input(Excel file)

| | PR Link | Status |
|---|---|---|
| 2 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/125565?_a=overview | |
| 3 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/125504?_a=overview | |
| 4 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/132924?_a=overview | |
| 5 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/125565?_a=overview | |
| 6 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/63757?_a=overview | |
| 7 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/145414?_a=overview | |
| 8 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140620?_a=overview | |
| 9 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140699?_a=overview | |
| 10 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140697?_a=overview | |
| 11 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/144255?_a=overview | |
| 12 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140545?_a=overview | |

# Continued



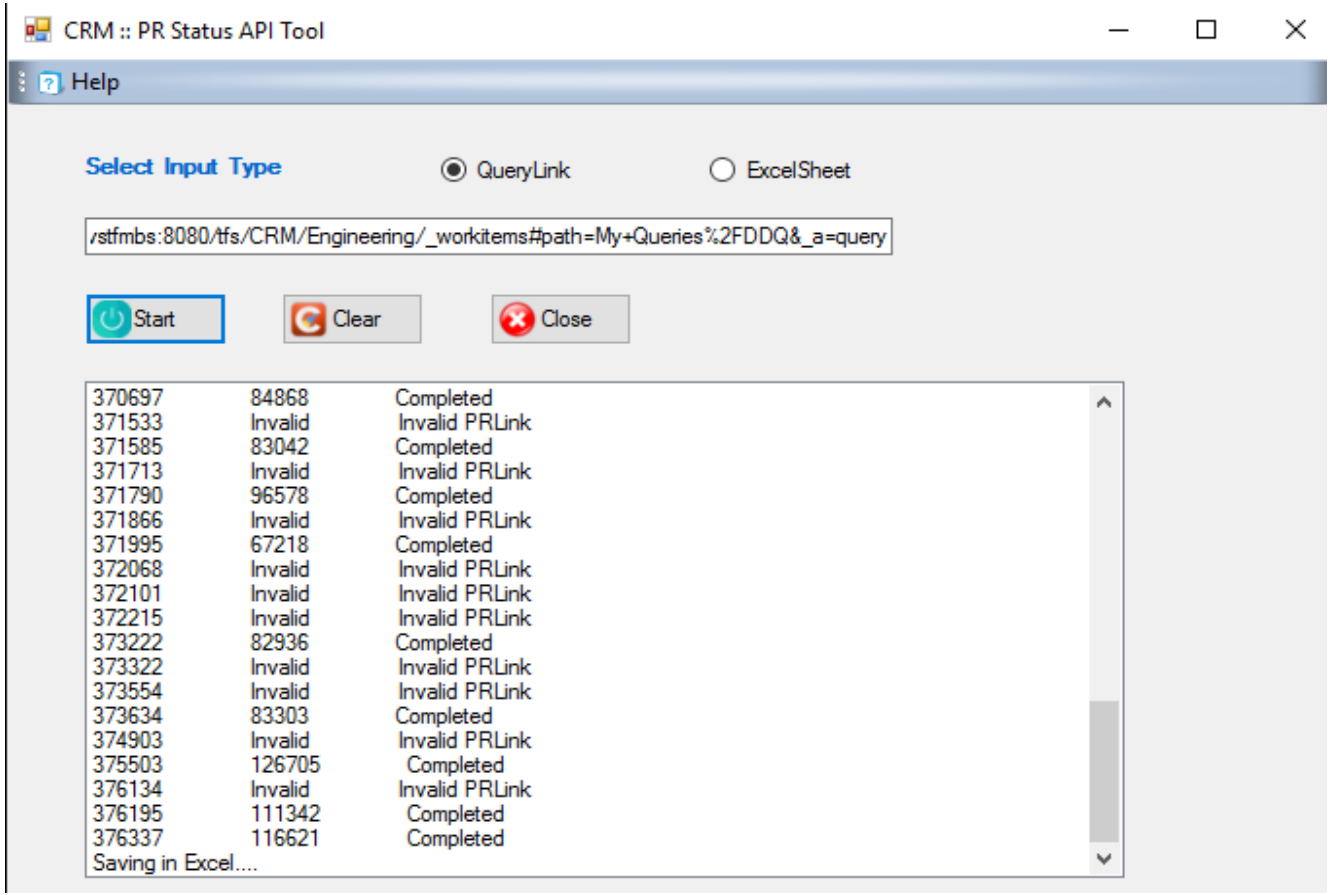

Status of the PRs given

Output Excel file

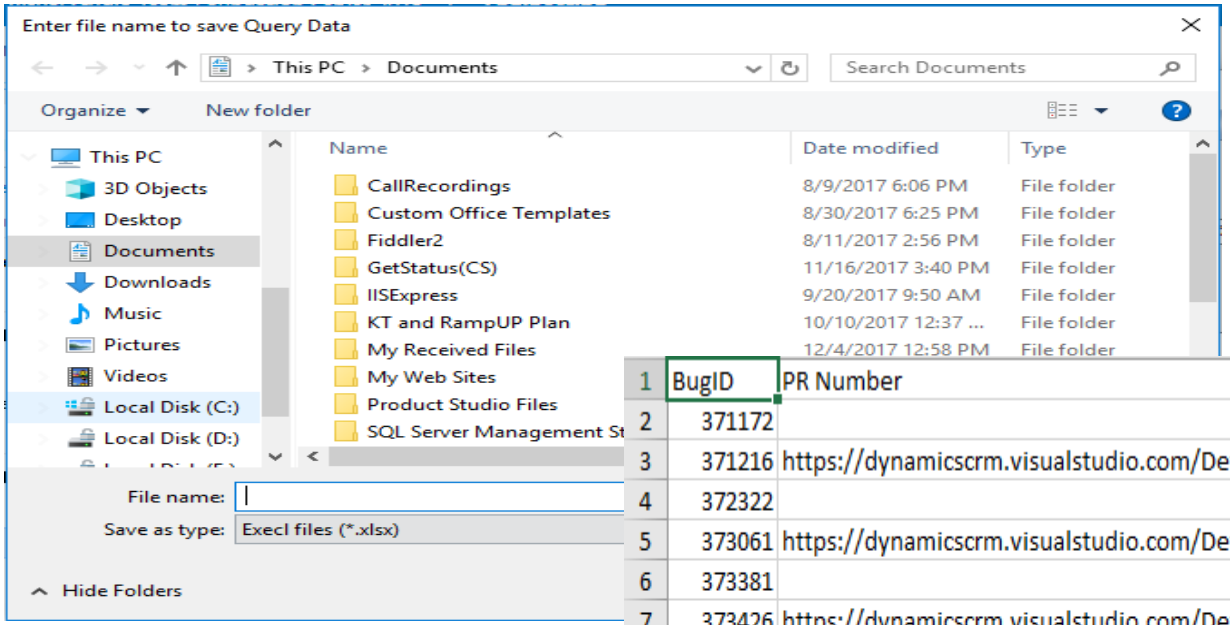
| | PR Link | Status |
|---|---|---|
| 2 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/125565?_a=overview | Completed |
| 3 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/125504?_a=overview | Abandoned |
| 4 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/132924?_a=overview | Active |
| 5 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/125565?_a=overview | Completed |
| 6 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/63757?_a=overview | Active |
| 7 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/145414?_a=overview | Abandoned |
| 8 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140620?_a=overview | Completed |
| 9 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140699?_a=overview | Completed |
| 10 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140697?_a=overview | Completed |
| 11 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/144255?_a=overview | Completed |
| 12 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest/140545?_a=overview | Completed |

# Continued

If User Input is Query Link



# Continued



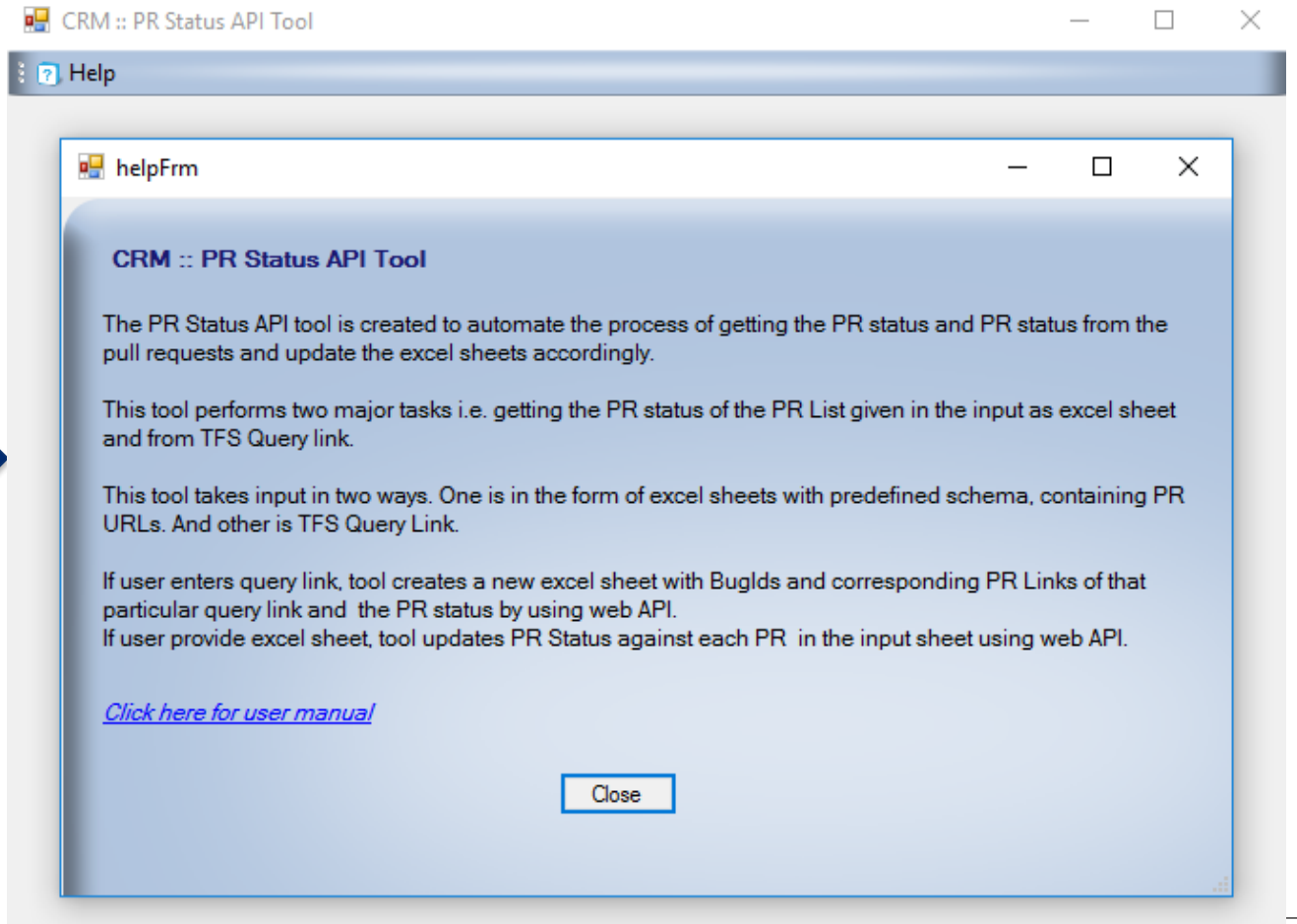

To save the query data

Output Excel file (saved in the file path user entered)

| | BugID | PR Number | PR Status |
|---|---|---|---|
| 2 | 371172 | | Invalid PRLink |
| 3 | 371216 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest | Completed |
| 4 | 372322 | | Invalid PRLink |
| 5 | 373061 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest | Completed |
| 6 | 373381 | | Invalid PRLink |
| 7 | 373426 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest | Active |
| 8 | 374377 | | Invalid PRLink |
| 9 | 374378 | | Invalid PRLink |
| 10 | 374483 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest | Active |
| 11 | 374596 | https://dynamicscrm.visualstudio.com/DefaultCollection/_git/CRM/pullrequest | Completed |
| 12 | 374736 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/98390?_a=overvie | Active |
| 13 | 375946 | https://dynamicscrm.visualstudio.com/_git/CRM/pullrequest/125434?_a=overvi | Completed |

# Continued

User can understand the tool functionality with “Help” option in the tool



# Limitations

## Constraints and Limitations of the current version of the tool

- The Input has to be in a predefined format.(Excel sheet should contain BugID, PRLink and Status columns)
- It only gives PR status but not Build status.

# Next Steps

## Plans for the consecutive versions

- The build status can also be given as output.

# Summary

## About the tool in a nutshell

- Helps the FTE in getting the status of the PR to track builds in an effective manner.
- Some predefined libraries and REST APIs to make the process more efficient and accurate.
- It reduces the effort in checking the status of the PR

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