GLOBAL ENGINEERING ACADEMY

Genesis

L&T Technology Services

L&T Technology Services

Document History

Ver. Rel. No.	Release Date	Prepared. By	Reviewed By	To be Approved By	Remarks/Revision Details
		Divyesh M			

Contents

Activity 2:- Statistical Analysis of Crop Production

Introduction

Today, India ranks second worldwide in the farm output. Agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. Agriculture is a unique business crop production which is dependent on many climate and economy factors. Some of the factors on which agriculture is dependent are soil, climate, cultivation, irrigation, fertilizers, temperature, rainfall, harvesting, pesticide weeds and other factors.The .csv file includes crop cultivation in different districts which also highlights the cultivation in different seasons ,year wise data on crop covered area (Hectare) and production (Tonnes). The data is used to study and analyse crop production, production contribution to district/State/country.The system is also a vital source for formulating crop related schemes and assessing their impacts. Implementation of the project using all the C++ concepts with extended LINUX concepts. In this project find out some key values using given data. Some point are given below:

1. Find State using Production
2. States with kharif crops
3. Remove Production using production number
4. How to find Production using ID
5. Count all crop production
6. Count of states with potato plants
7. Find out States with minimum area
8. FInd out the Maximum production District

Implemented this all cases in the project to find the value/place immediately using key values. Which helps to analyze the data easily as well as saves the time .

Requirements:

High Level Requirements:

ID	Description
HL_01	When user gives input as a production ID then find State using production
HL_02	Find out states with kharif season
HL_03	Using area code should remove the respective production from database
HL_04	If user gives the productionID then code should able to find the type of production
HL_05	Should able to find count of database
HL_06	Find the number of States whose grows the potatoes crops
HL_07	Which States have a minimum area.
HL_08	Gives the district which grows the maximum production.

Low Level Requirements:

ID	Description
LL_01_HH_01	Read Production appropriately
LL_02_HH_02	Get Season function should work
LL_03_HH_03	If user enter area code then code should get it properly
LL_04_HL_04	define Itrator should increment for every database entry
LL_05_HL_05	Production should not vary continuously

LL_06_HL_06	Getting the value of crops
LL_07_HL_07	Comparison function need to work properly
LL_08_HL_08	Getting value of district for each iteration

Design
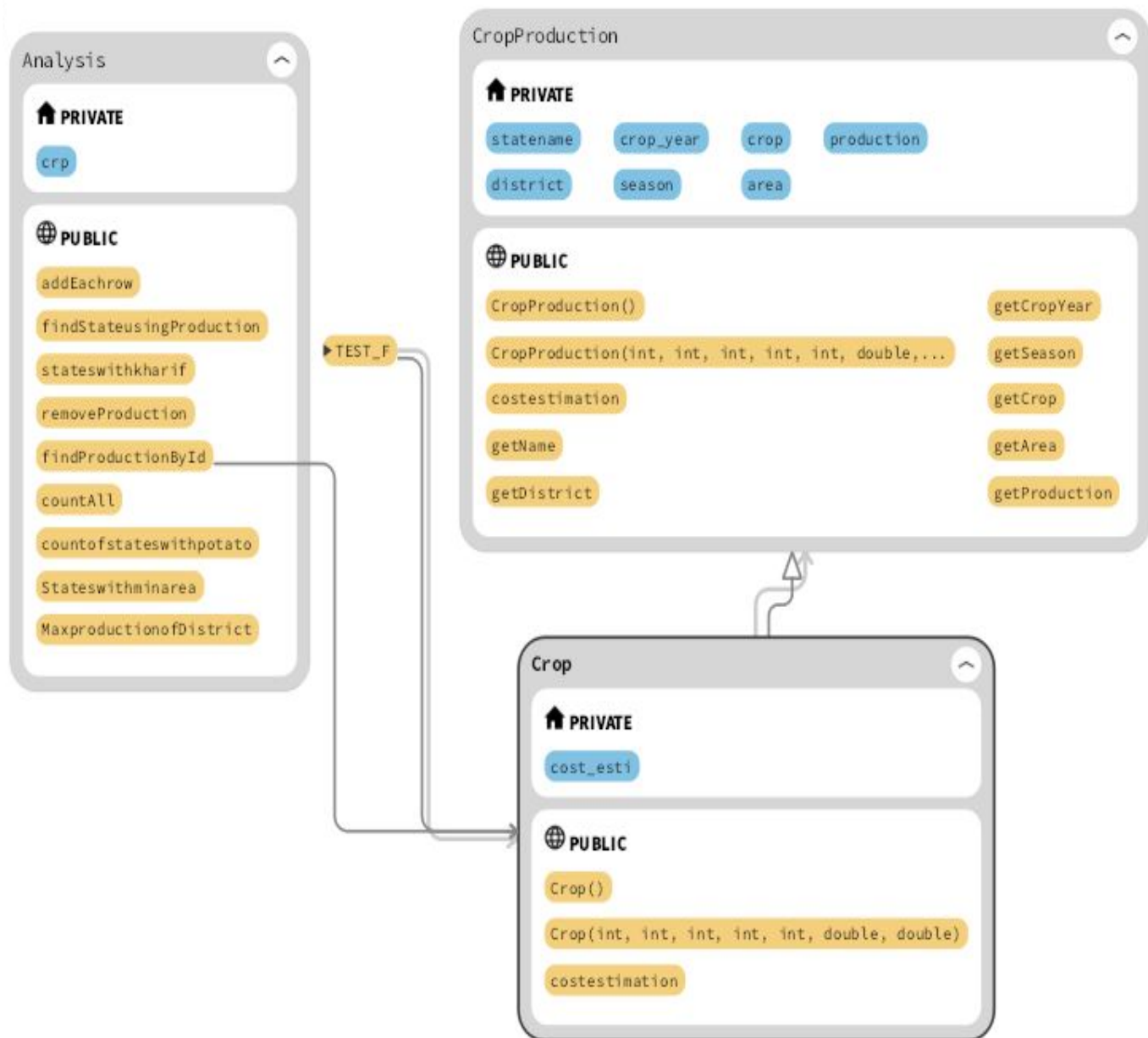
- **Behavioral Diagrams**

    1. **USE Case Diagram**
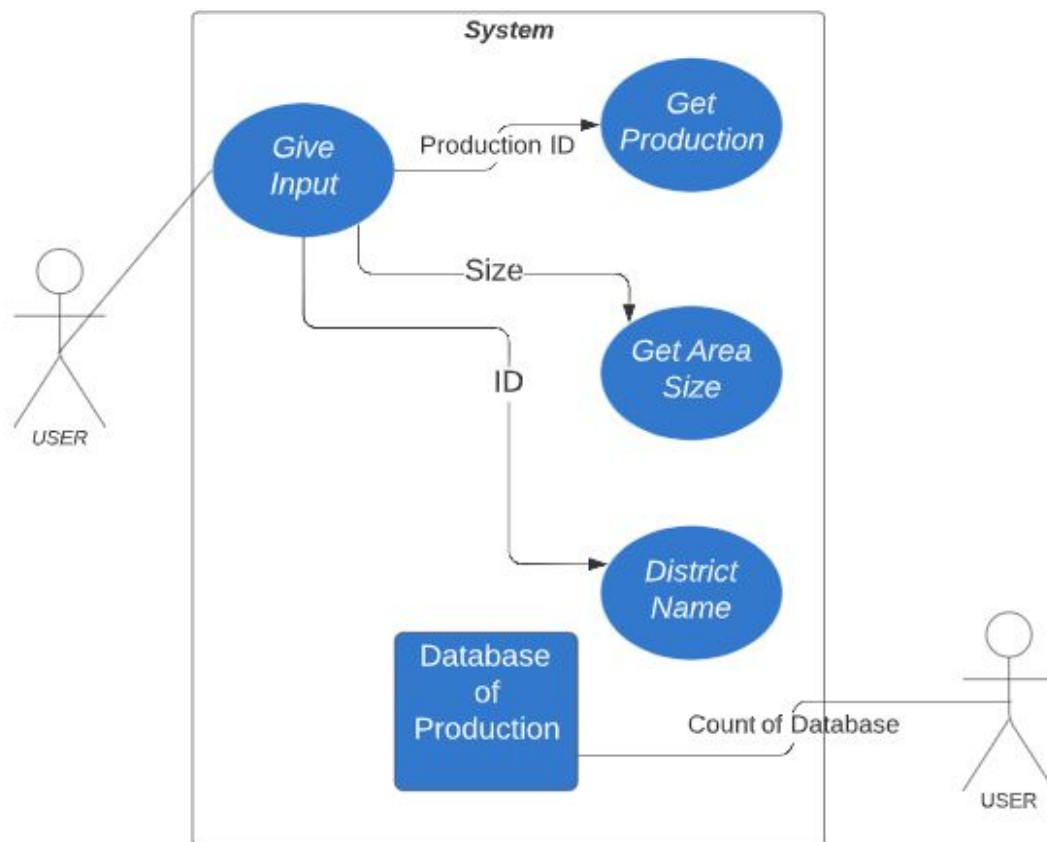
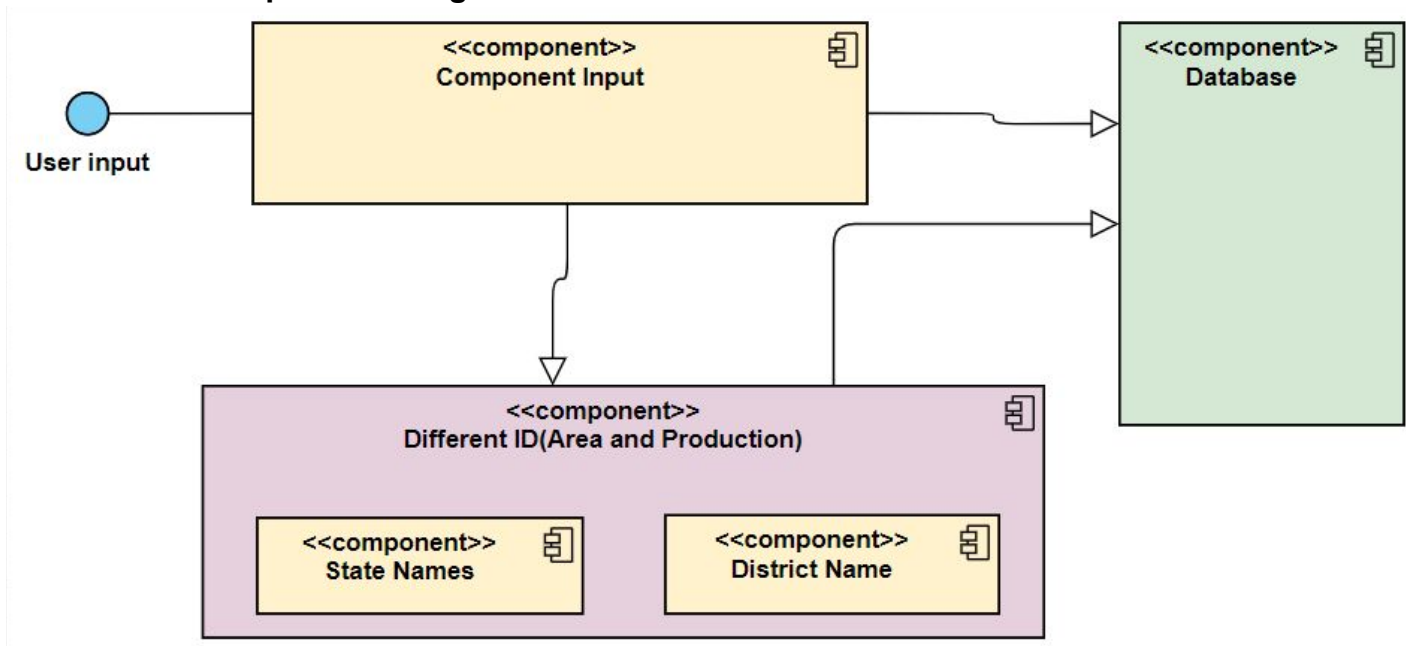   2. **Activity Diagram**

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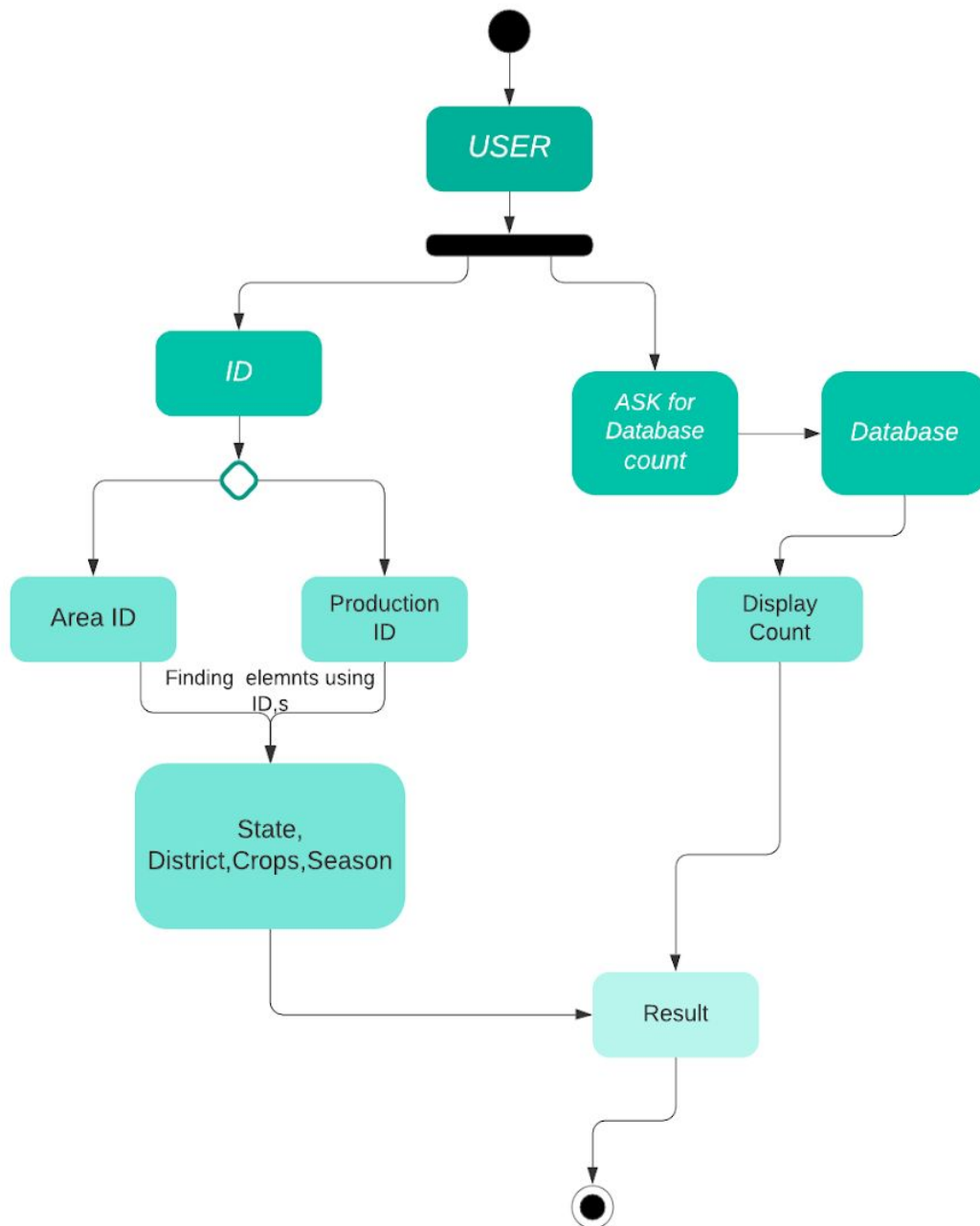
● **Structural Diagrams**

1. Class Diagram

2. Components Diagram

Test Plan

1. Requirement based testing

TEST_ID	Description	Expected Input	Expected Output	Actual Output
1_HL_01	When user gives input as a production ID then find State using production	Input Should be Production ID to find state	The state name with respect to PRoduction ID	TEST Case passed
2_HL_02	Find out states with kharif season	Pass Kharif to Season column in database using iterator	List of the States whose grows up Kharif	Complete list of states
3_HL_03	Using area code should remove the	Area ID	Delete Complete data related to Area ID	Data related to this is removed

	respective production from database			
4_HL_04	If user gives the productionID then code should able to find the type of production	Production ID	Type of the Production	TEST case passed
5_HL_05	Should able to find count of database	Pass the database to Iterator	Count of the database	Displayed Count
6_HL_06	Find the number of States whose grows the potatoes crops	Pass state column to iterator	List of States Whose grows potato crops	Complete list of states
7_HL_07	Which States have a minimum area.	Area itself to iterator	The State name Which has minimum area	State name(whose has less area)
8_HL_08	Give the districtName which grows the maximum production.	Production	The Name of district will display which has maximum production	District Name displayed

2. Boundary condition testing

1) When user wants to find District or State which is not there in database
2) Limited Database
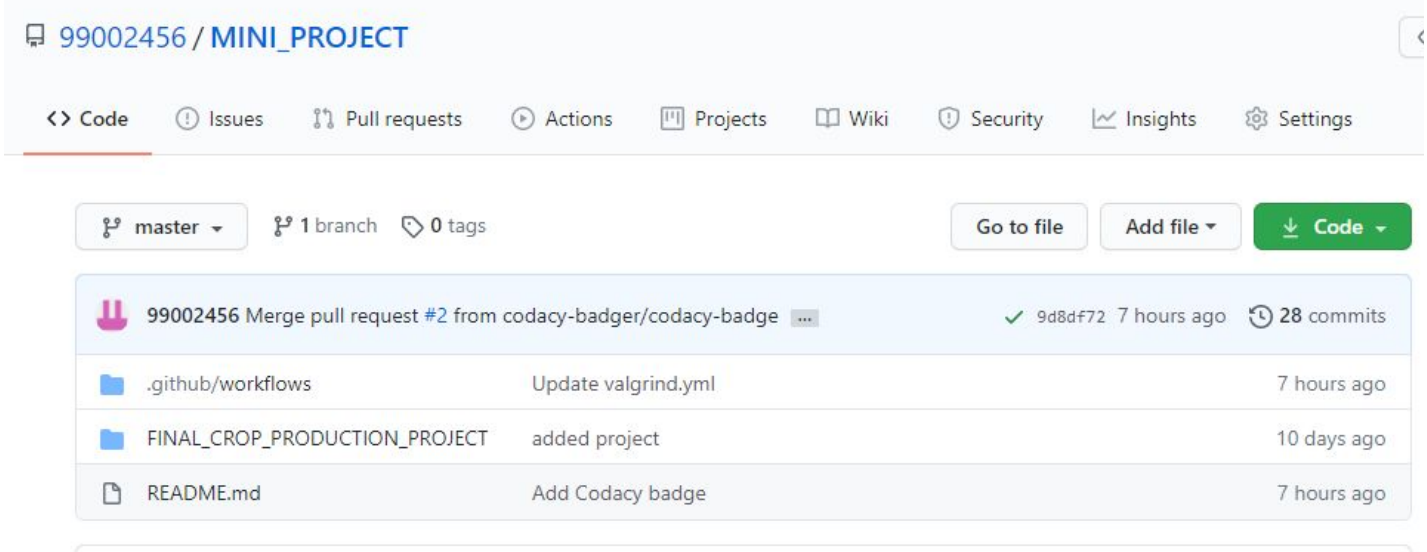
3. Scenario Based testing

1) When user give String instead of integer value
2) When the user enters an operand which is undefined

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Activity 3:- GITHUB

1. GITHUB repository
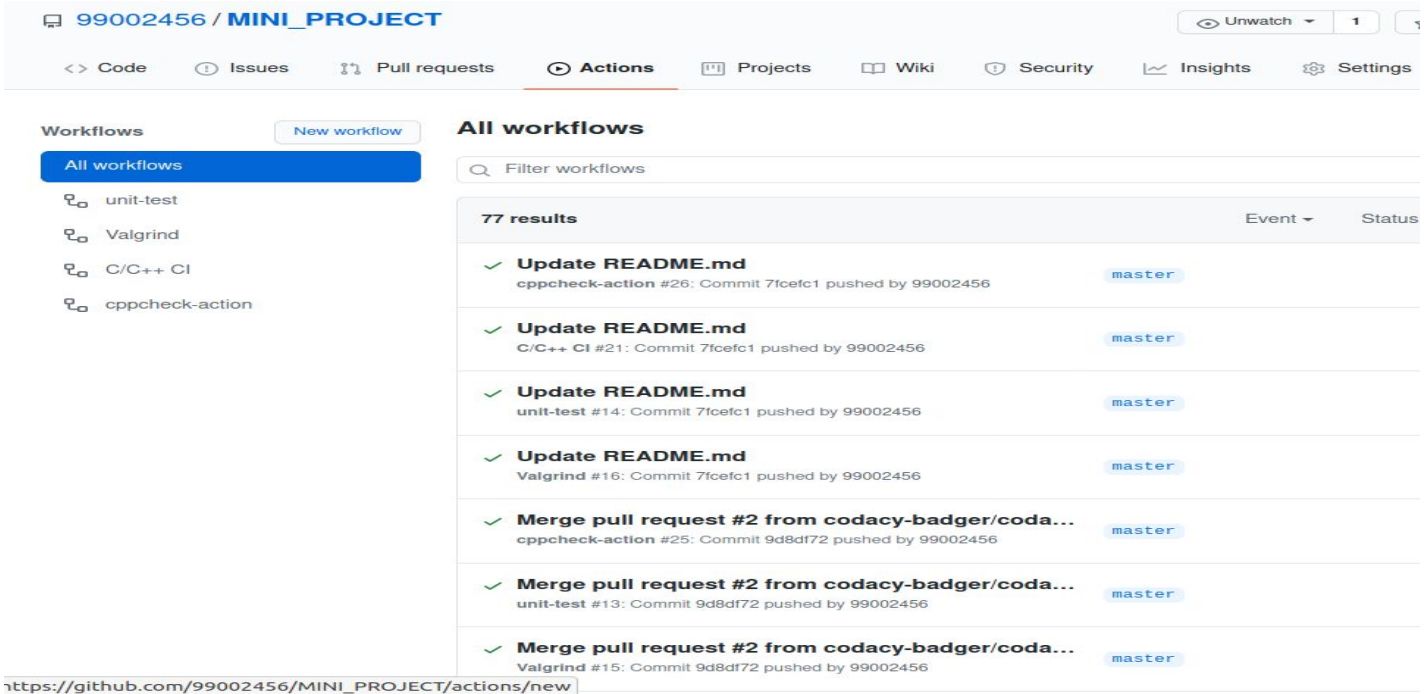
GITHUB Link: https://github.com/99002456/MINI_PROJECT.git

2. GITHUB Actions

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🖥 99002456 / **MINI_PROJECT**   👁 Unwatch ▾

<> **Code**   ⓘ Issues   ⥮ Pull requests   ▷ Actions   ▥ Projects   📖 Wiki   ⓘ Security   📈 Insights   ⚙ Se

⑂ master ▾   **MINI_PROJECT** / **README.md**

99002456 Update README.md   Late

👥 2 contributors   🟪 ⚙

5 lines (4 sloc) | 756 Bytes

FINAL_CROP_PRODUCTION_PROJECT

Build	**Unit Test**	**cppcheck**	**Valgrind**	**Codacy**
C/C++ CI `passing`	unit-test `passing`	cppcheck-action `passing`	Valgrind `passing`	code quality `B`

3. GITHUB issue

- **Raising Issue**

🖥 99002456 / **MINI_PROJECT**

<> Code   ⓘ Issues `1`   ⥮ Pull requests   ▷ Actions   ▥ Projects   📖 Wiki   ⓘ Security   📈 Insights   ⚙ Settings

Getting error in header after removing one line from file #3

ⓘ **Open**   99002456 opened this issue now · 0 comments

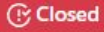99002456 commented now   Owner ☺ ⋯

After editing crops.h files getting error. as well as cpp-check in also not working.

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- **Issue resolved and closed**

🖥 99002456 / **MINI_PROJECT**

<> Code   ⊙ Issues **1**   ⇅ Pull requests   ▷ Actions   ▥ Projects   📖 Wiki   ⛉ Security   ⤳ Insights   ⚙ Settings

Getting error in header after removing one line from file #3

🕑 **Closed**   99002456 opened this issue 3 minutes ago · 1 comment

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99002456 commented 3 minutes ago   Owner ☺ ⋯

After editing crops.h files getting error. as well as cpp-check in also not working.

99002456 commented now   Author Owner ☺ ⋯

Error in 24 lines. Make it as a #endif

🚫 **99002456** closed this now