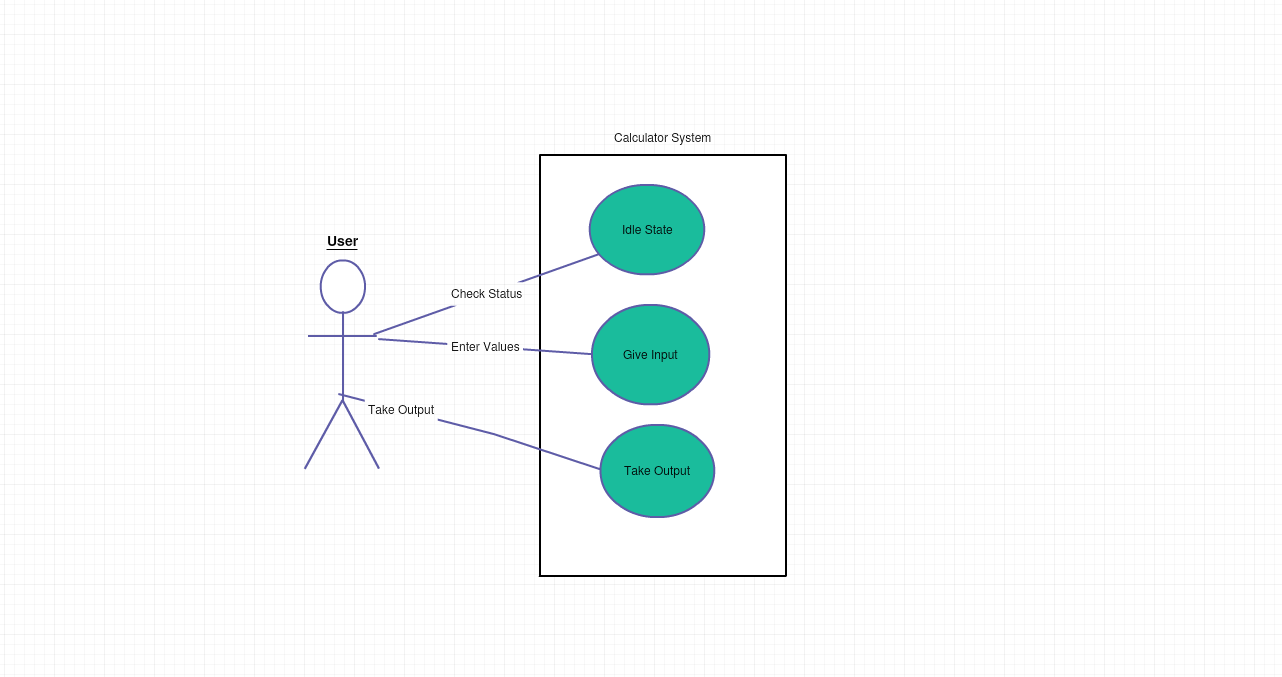
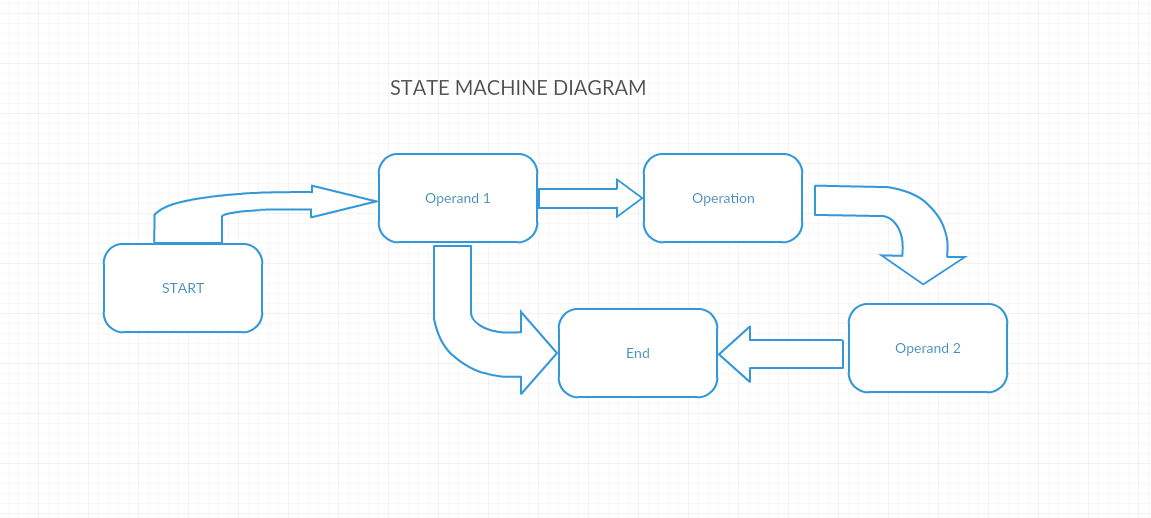
REQUIREMENTS:

|  |  |
| --- | --- |
| HH\_1 | Calculator with basic arithmetic operations. |
| HH\_2 | Scientific calculator with basic scientific fucntions |
| HH\_1\_LL\_1 | Addition(Take 2 operands as input and perform the addition operation) |
| HH\_1\_LL\_2 | Subtraction(Take 2 operands and subtract the 2nd operand from first)) |
| HH\_1\_LL\_3 | Multiplication(take 2 operands as input and multiply the 1st operand with 2nd) |
| HH\_1\_LL\_4 | Division(Take 2 operands as input from the user where 1st operator is dividend and the 2nd operator is quotient.) |
| HH\_2\_LL\_1 | Power function(take two operators from the user and raise the 1st operand o power of 2nd operand using the pow function) |
| HH\_2\_LL\_2 | Root function(It takes the single operand from the user as input and using sqrt function o find the squareroot of the fucntion) |
| HH\_2\_LL\_3 | Logarithm function(take the single operand and find the lo of the opernd using the log fucntion) |
| HH\_2\_LL\_4 | Sine function(it takes the operand from the user and return the sine of it using the math function ) |
| HH\_2\_LL\_5 | Cos function(It takes the operand from the user and return the cosine of the operand using) |
| HH\_2\_LL\_6 | Tan function takes the operand from the user and returns the tangent of the operand using tan operation included in math.h header file |
| HH\_2\_LL\_7 | Cosec function takes the operand from the user and find cosecant of the operand |
| HH\_2\_LL\_8 | Sec function takes the operand and finds the result by returning imverse of the cos function |
| HH\_2\_LL\_9 | Cot function takes he operand and returns the inverse of the result of tangent function. |

Behavioural diagrams:

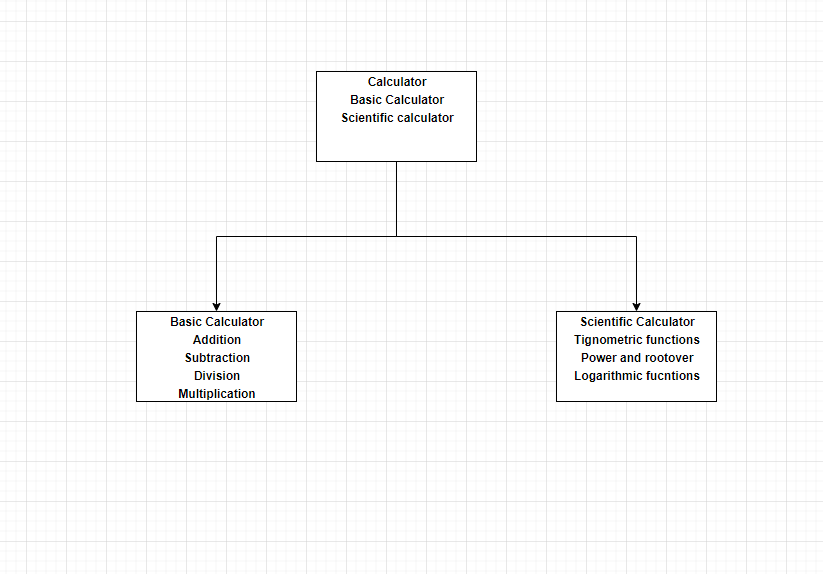


USE CASE DIAGRAM

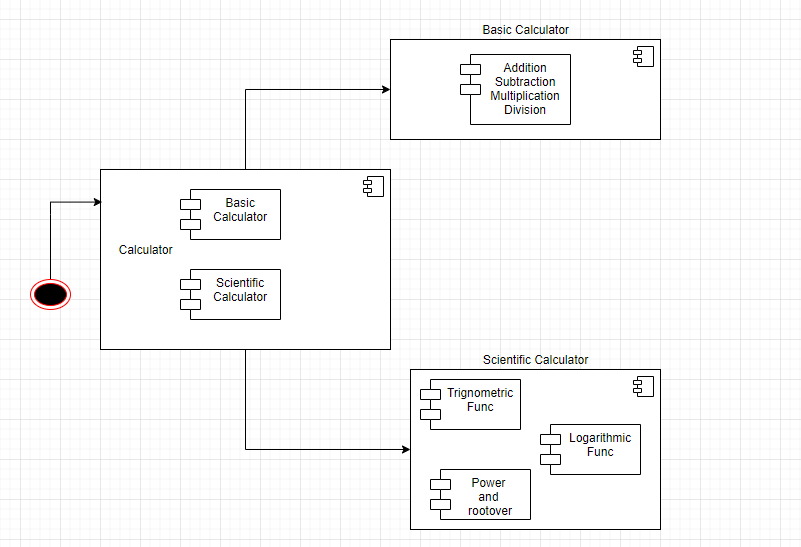


STATE MACHINE DIAGRAM 1

Structural diagrams:



CLASS DIAGRAM 1

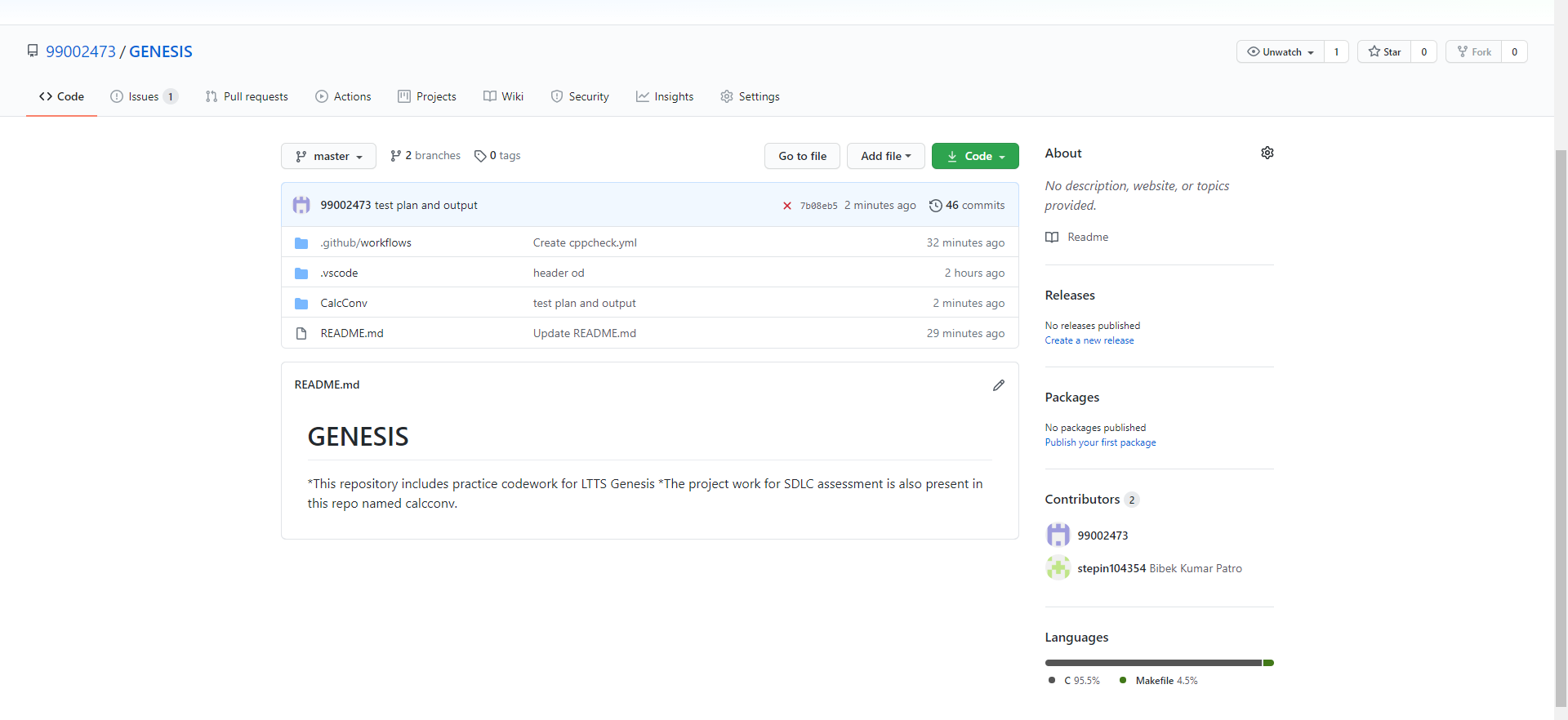
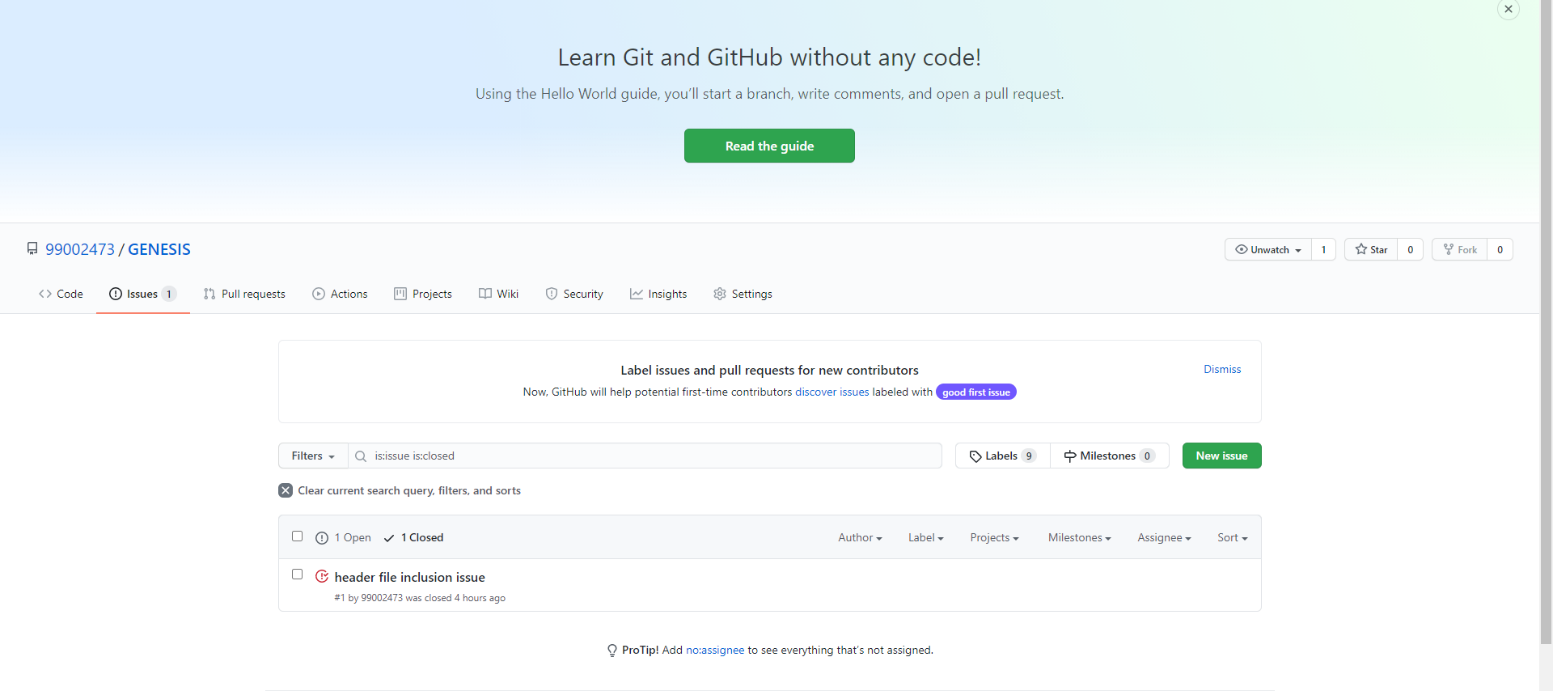
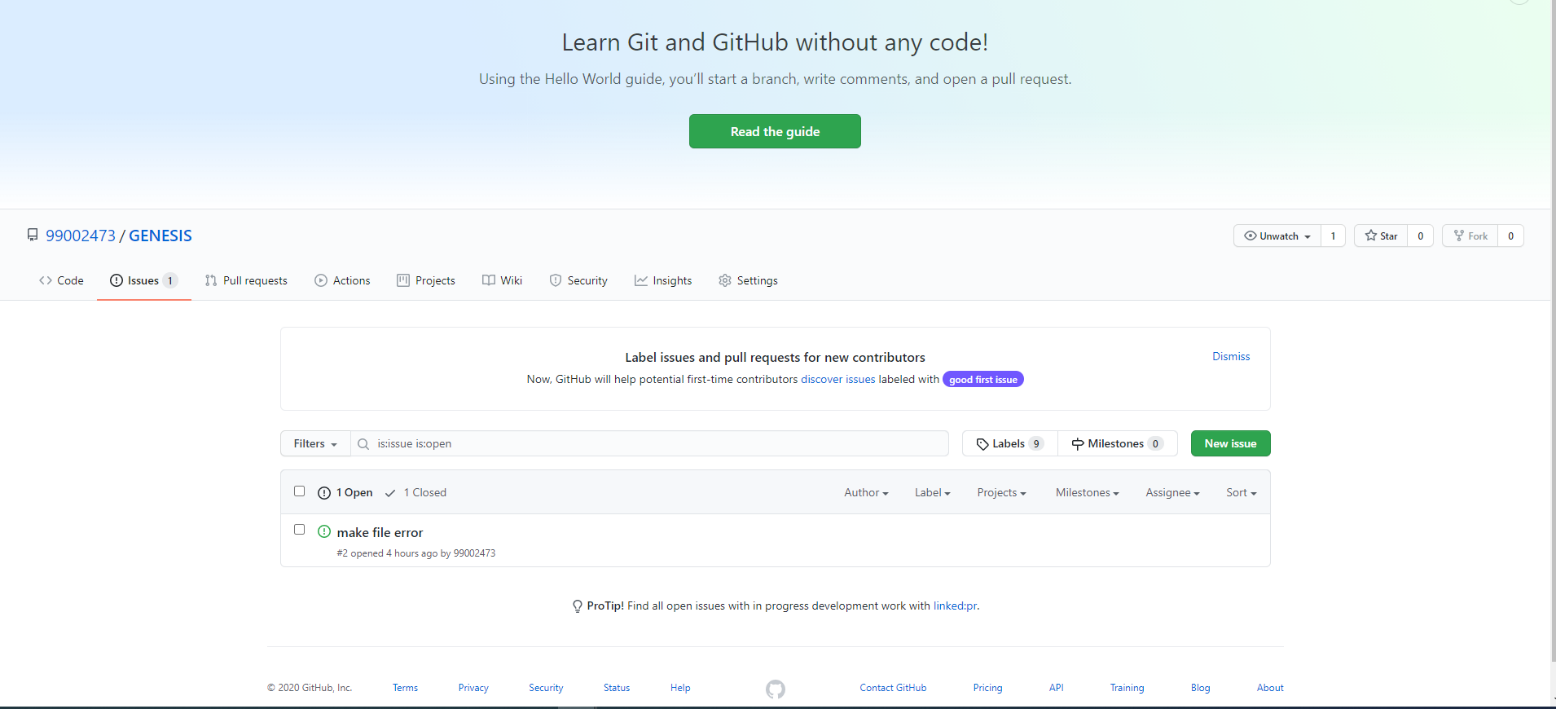
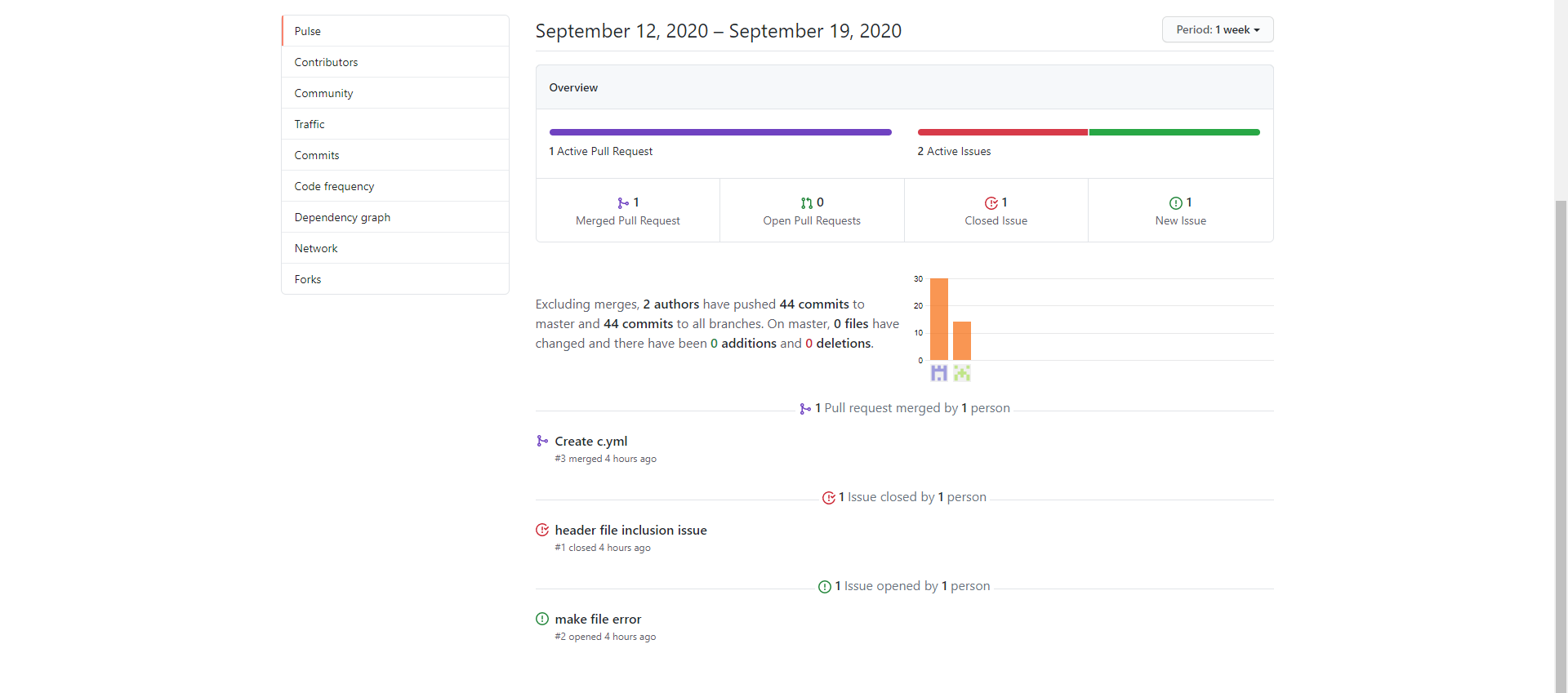
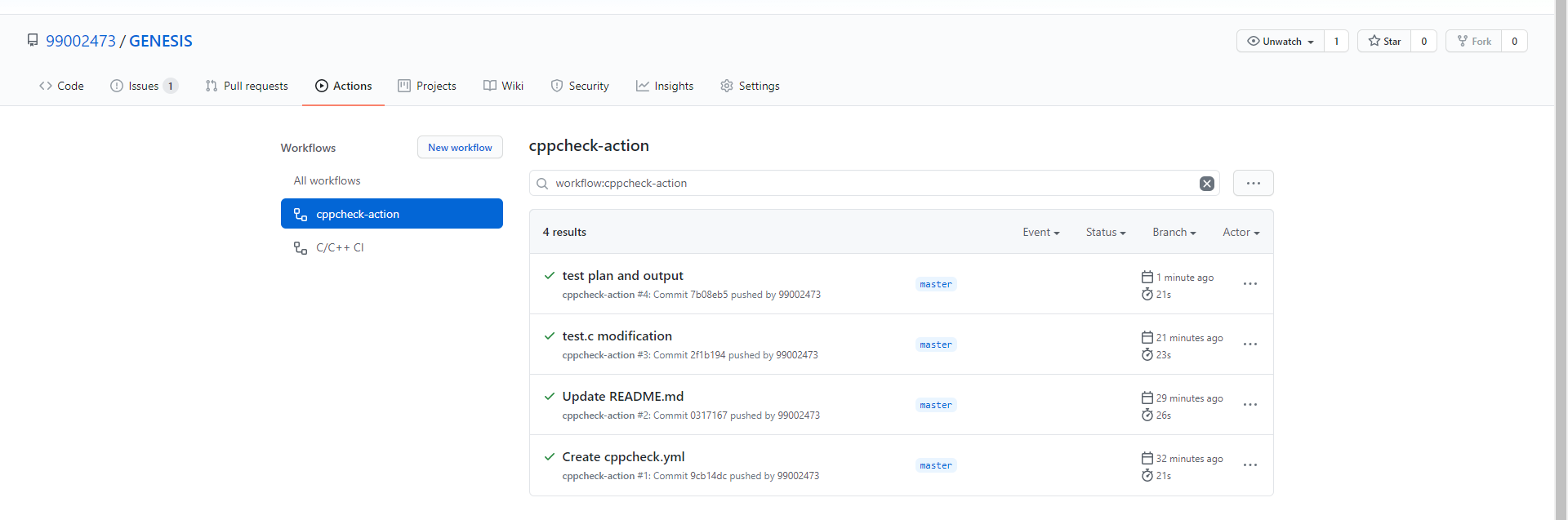
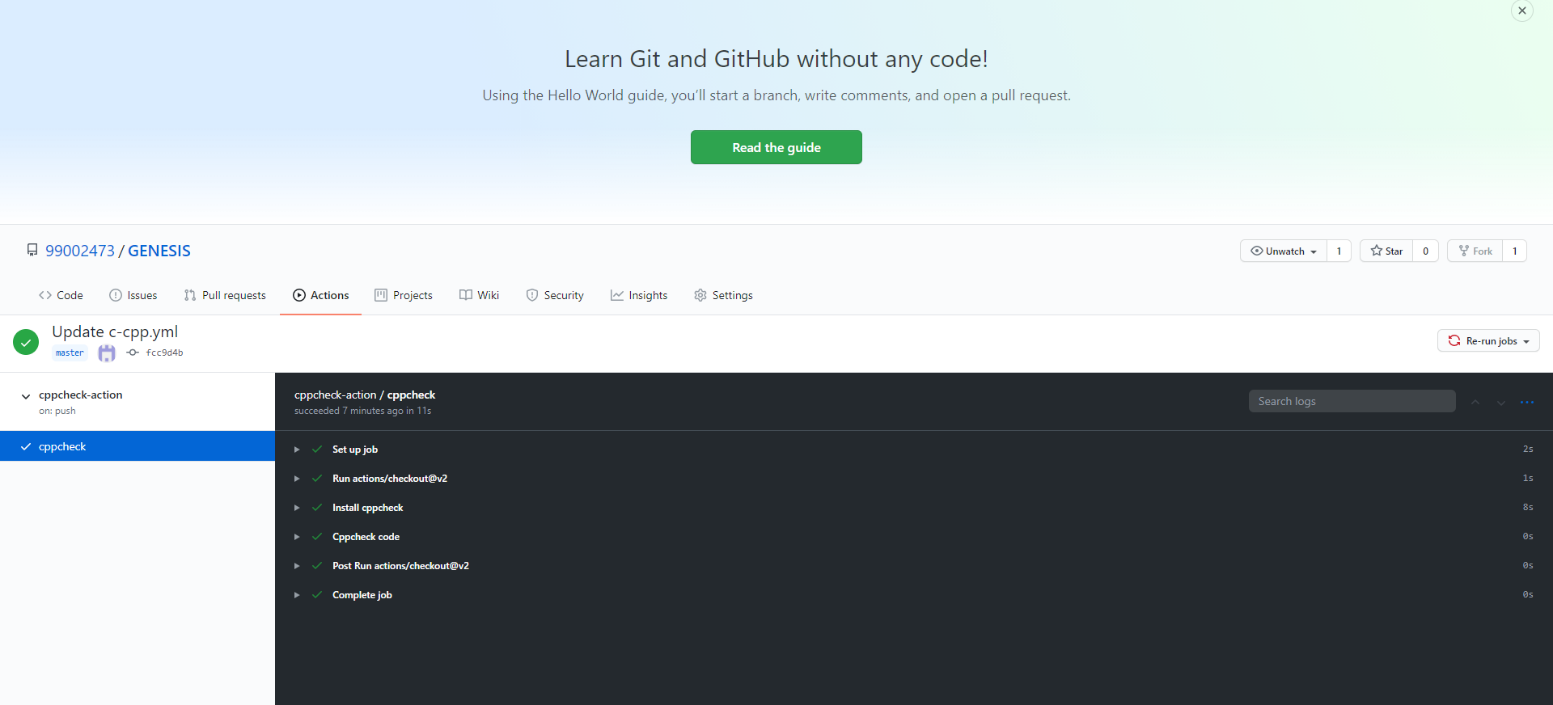
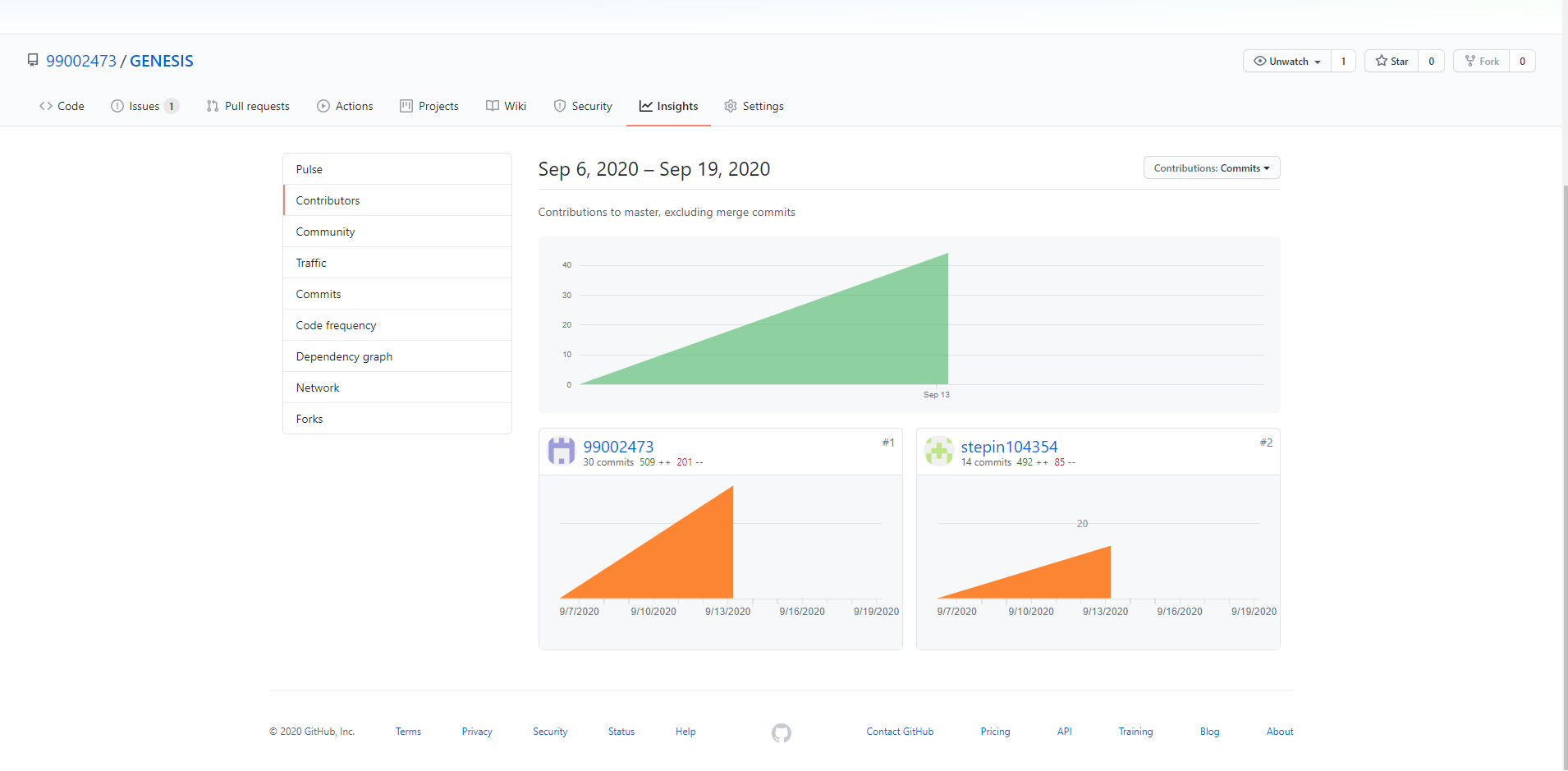
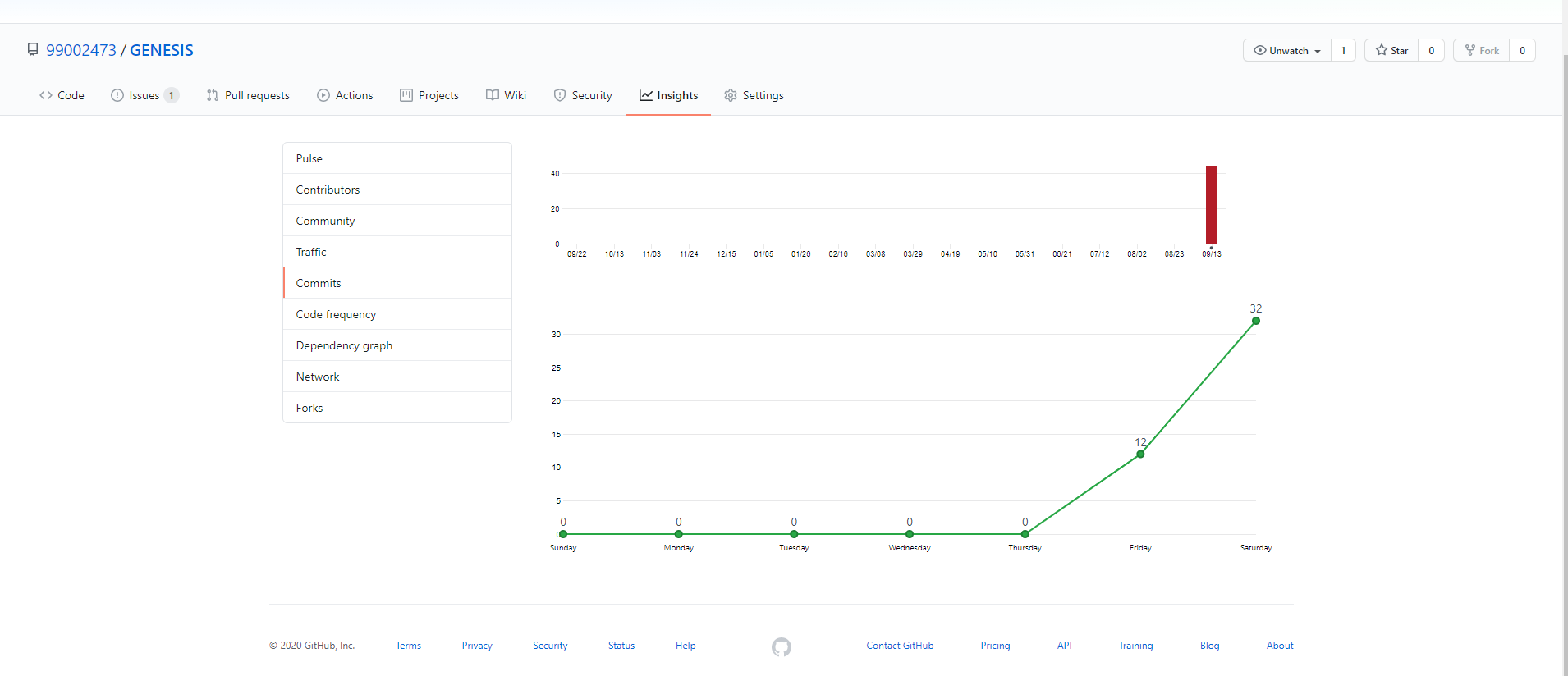
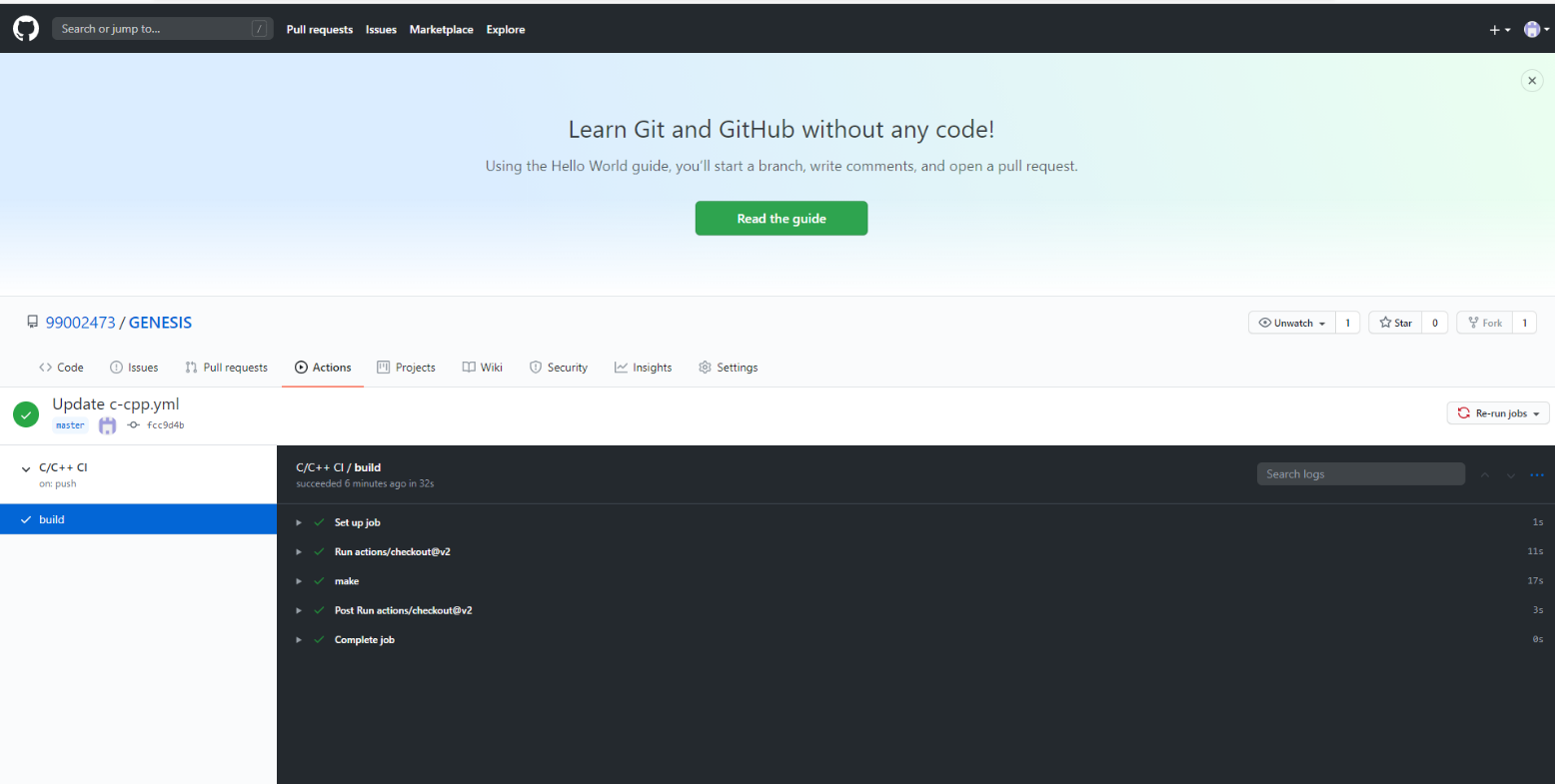
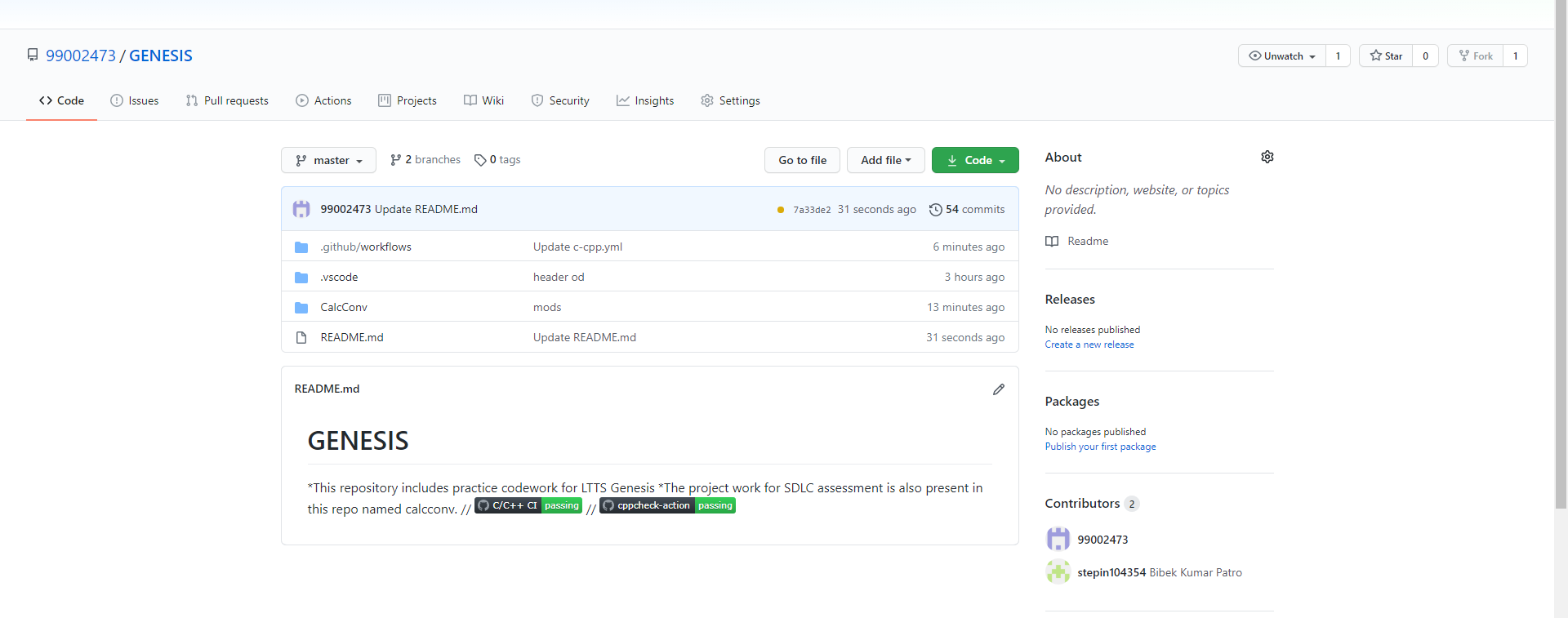


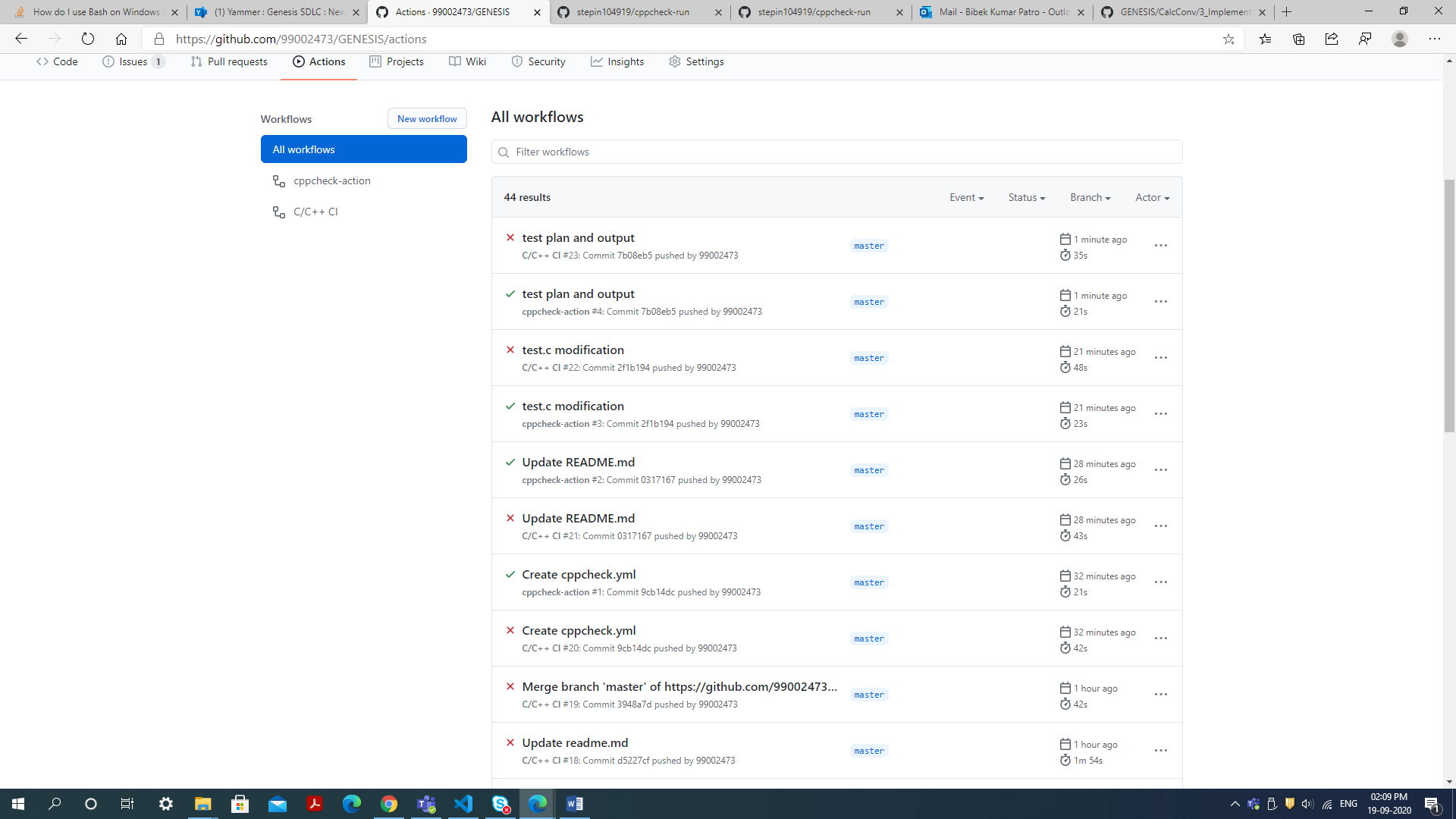
COMPOSITE STRUCTURE DIAGRAM

Test Plan:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| I.D. | Description | PreCondition | STEPS | Input | Expected output | Actual Output |
| TC-1 | To add two integer and display the result on ten digit calculator | Both operands are entered | 1.Key in a valid integer from - 9999999999 to +9999999999 2.Key in operator + 3.Key in second operand,a valid integer from - 9999999999 To +999999999 | 260+210 | 470 |  |
| TC-2 | To subtract two integer and display the result on ten digit calculator | Both operands are entered | 1.Key in a valid integer from - 9999999999 to +9999999999 2.Key in operator - 3.Key in second operand,a valid integer from - 9999999999 To +999999999 | 260-210 | 50 |  |
| TC-3 | To multiply two integer and display the result on ten digit calculator | Both operands are entered | 1.Key in a valid integer from - 9999999999 to +9999999999 2.Key in operator + 3.Key in second operand,a valid integer from - 9999999999 To +999999999 | 260\*210 | 54600 |  |
| TC-4 | To divide two integer and display the result on ten digit calculator | Both operands are entered | 1.Key in a valid integer from - 9999999999 to +9999999999 2.Key in operator + 3.Key in second operand,a valid integer from - 9999999999 To +999999999 | 260/210 | 1 |  |
| TC-5 | To find the average of two numbers | Both operands are enetered |  | (260+210) |  |  |
|  | To find the percentage | Single operand ned to be enetered |  |  |  |  |
|  | To find the power | Both operands should be entered |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1



libk

link

<https://github.com/99002473/GENESIS>