

Sri Lanka Institute of Information Technology Sri Lanka

**Detection of Energy Consumption and Performance of
Third-party Applications using Machine Learning**

22_23 J 87

Status Document 2



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01.User Workload

Completed individual components

- Development of Code scanner algorithm
- Create two Machine learning Model to predict defective value and Overall complexity
- Development of Equations Builder
- Development of Recursive CSS function to Draw abstract view

Documentation work – Individual Reports

- Project Cover Sheet
- Project Charter Document
- Project Proposal Report
- Status Document 1
- Individual Final Report
- Status Document 2

Documentation work – Group Reports

- Topic Evaluation Form
- Project Proposal Presentation
- Progress Presentation 1 slides
- Progress Presentation 2 slides
- Research Paper
- Final Group Report
- Research Poster
- Log Book

02. Project Management with Tools

02.1. Screenshots – MS Teams, Google Meet and WhatsApp Calls

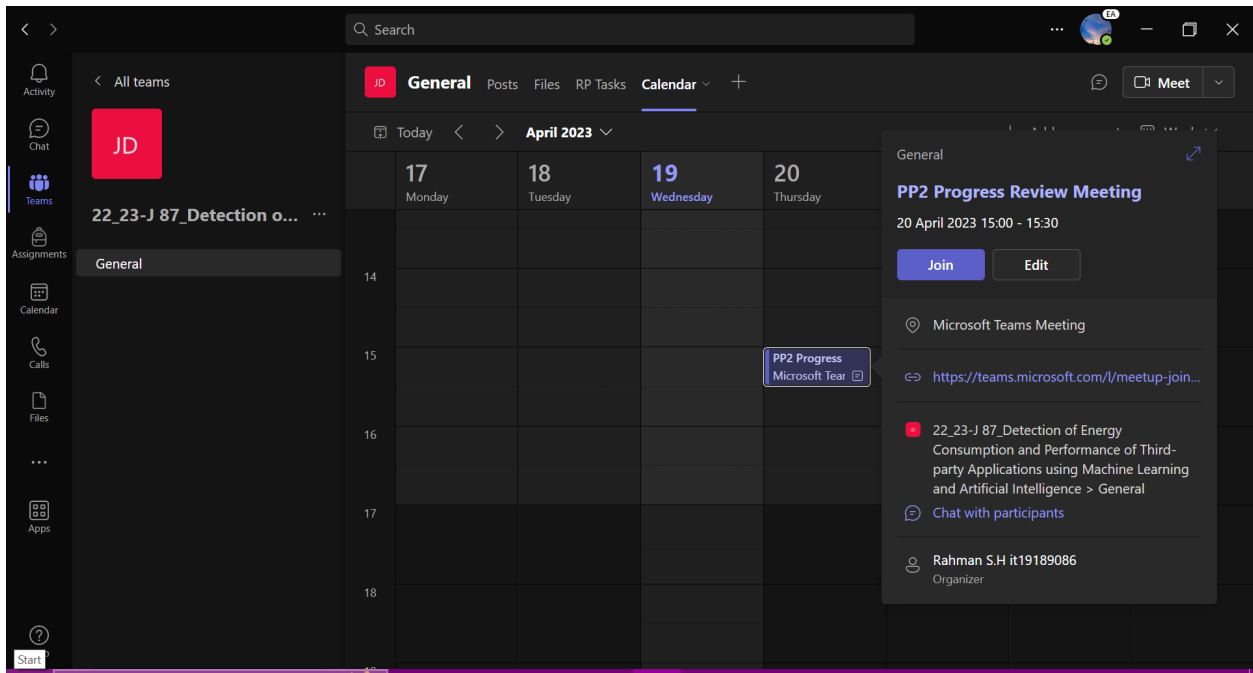


Figure 1 - MS Teams Calendar and Meetings

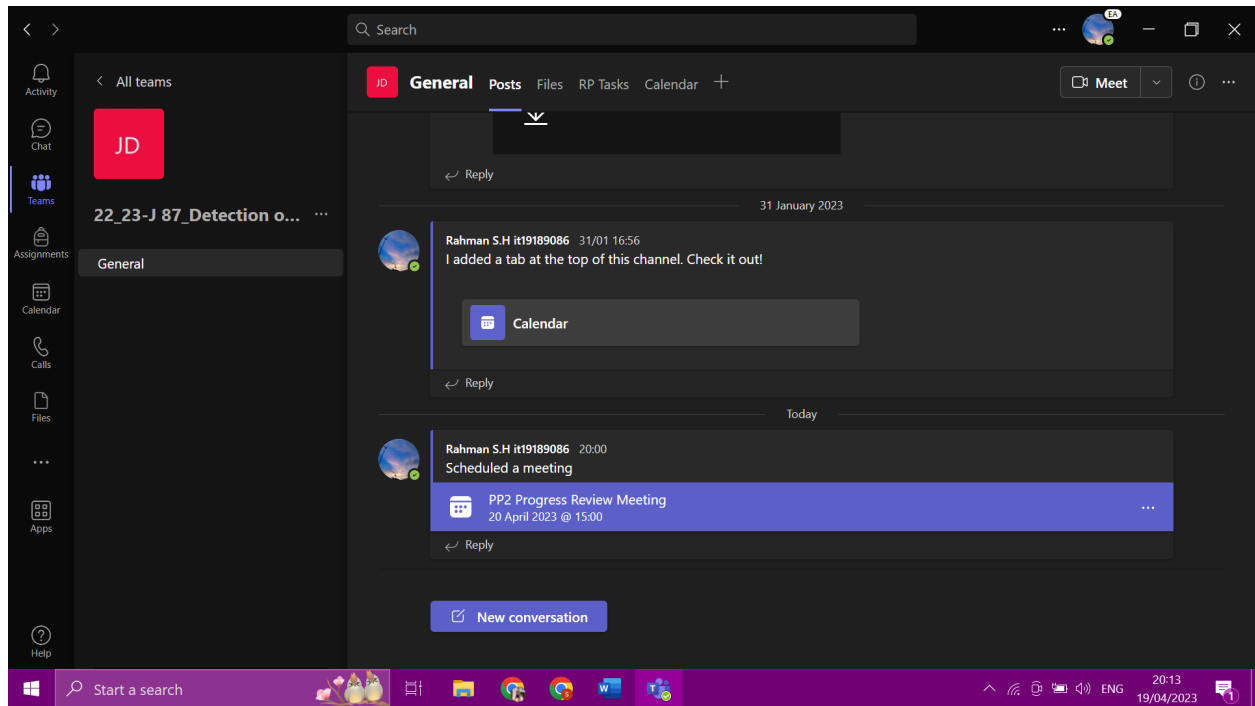


Figure 2 - MS Teams Calendar and Meetings

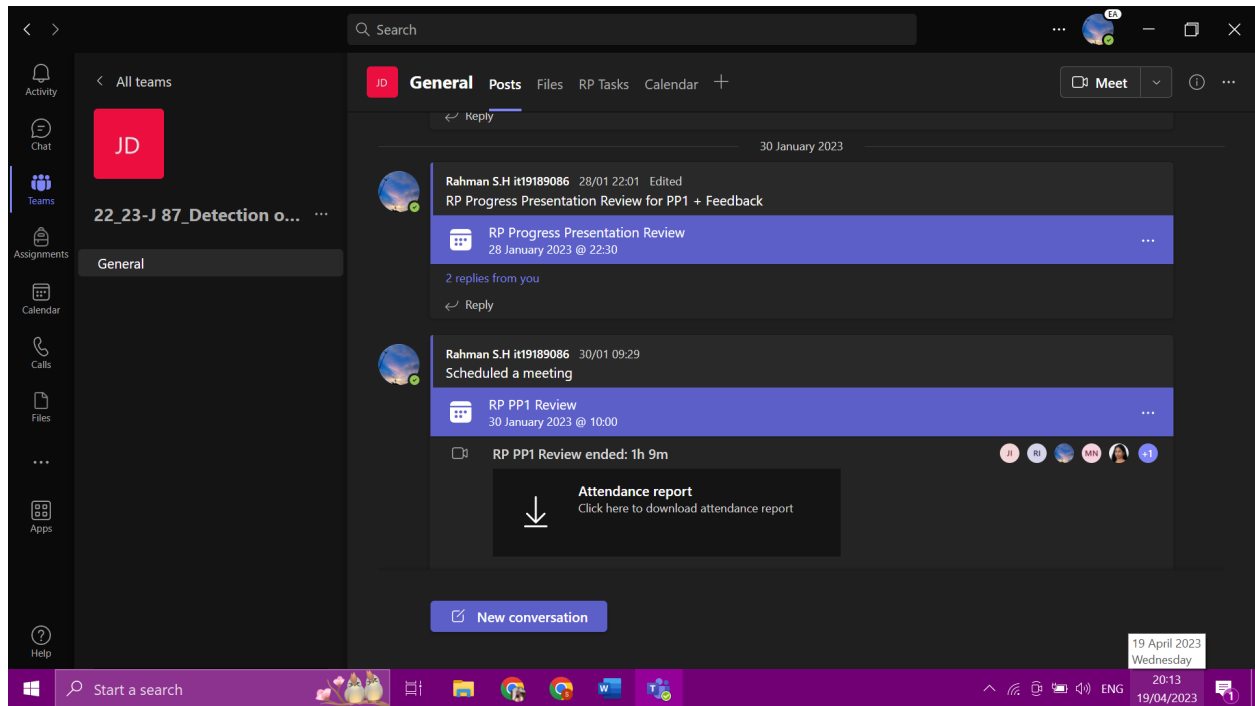


Figure 3 - MS Teams Calendar and Meetings

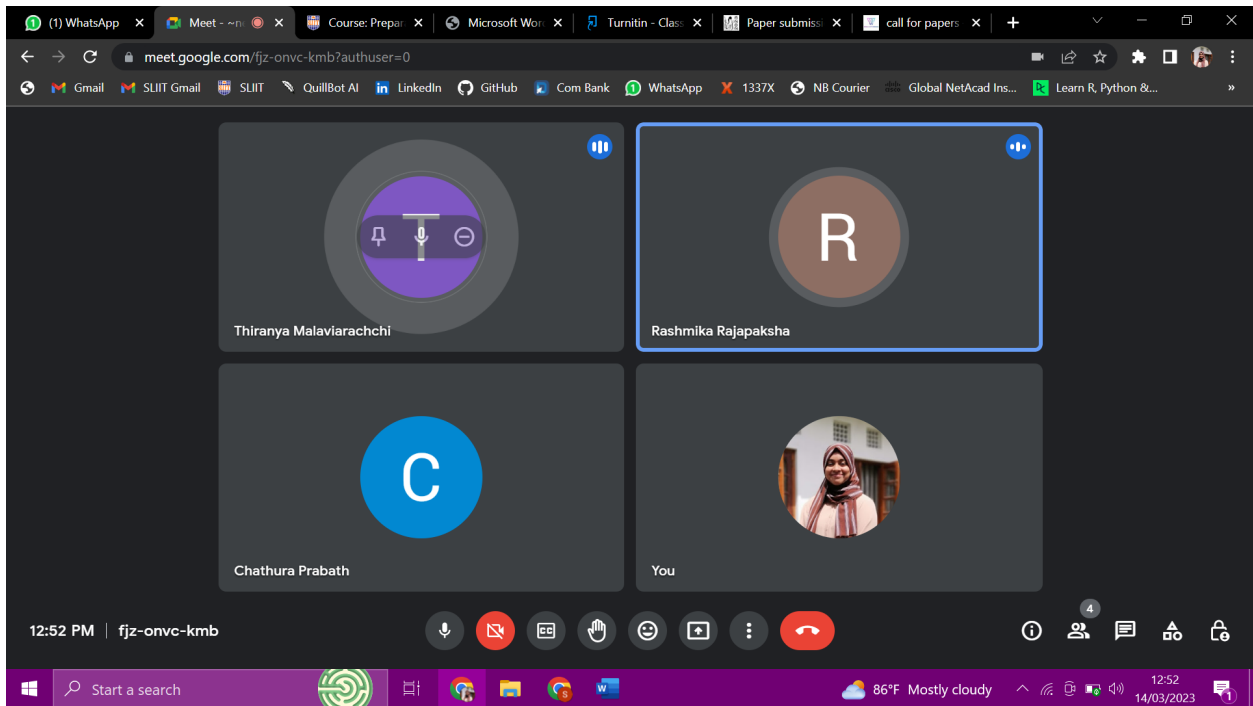


Figure 4 - Google Meet Meetings

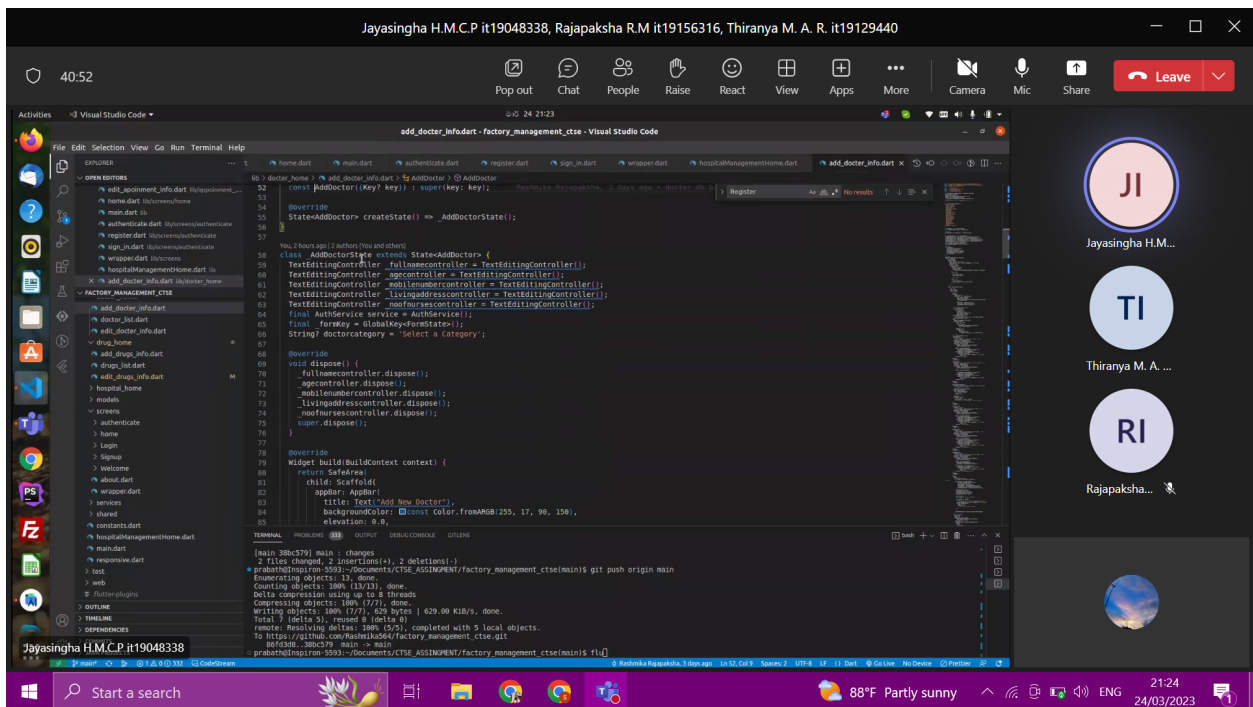


Figure 5 - MS Teams Meetings

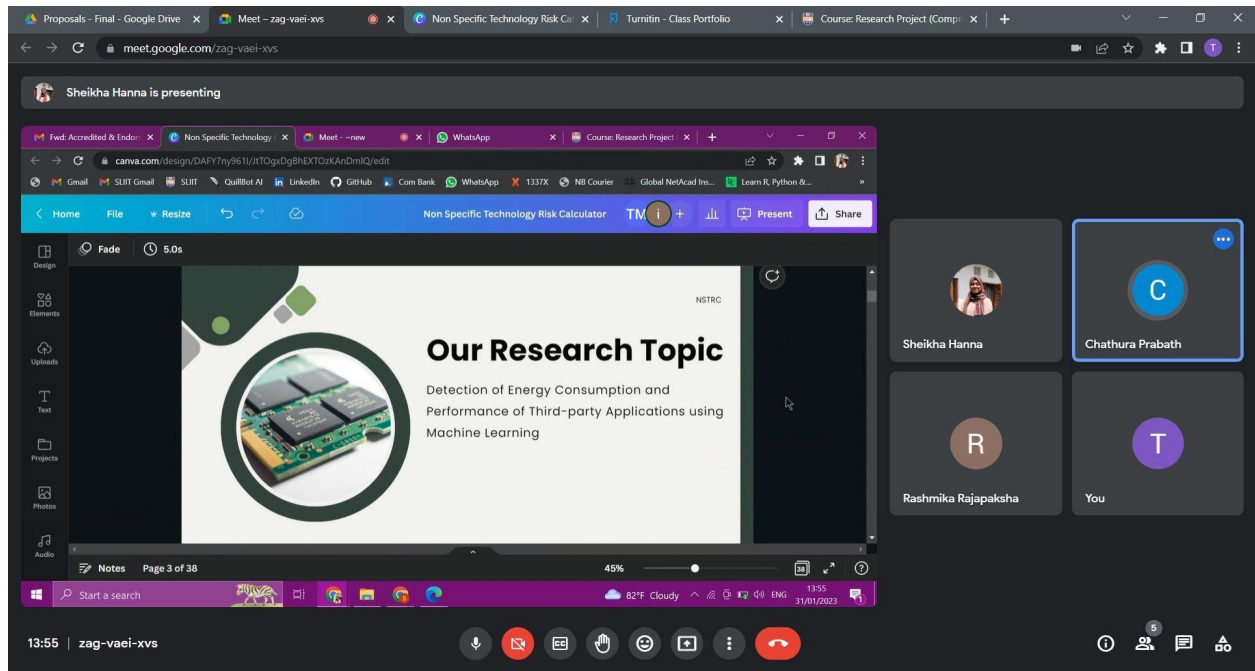


Figure 6 - Google Meet Meetings

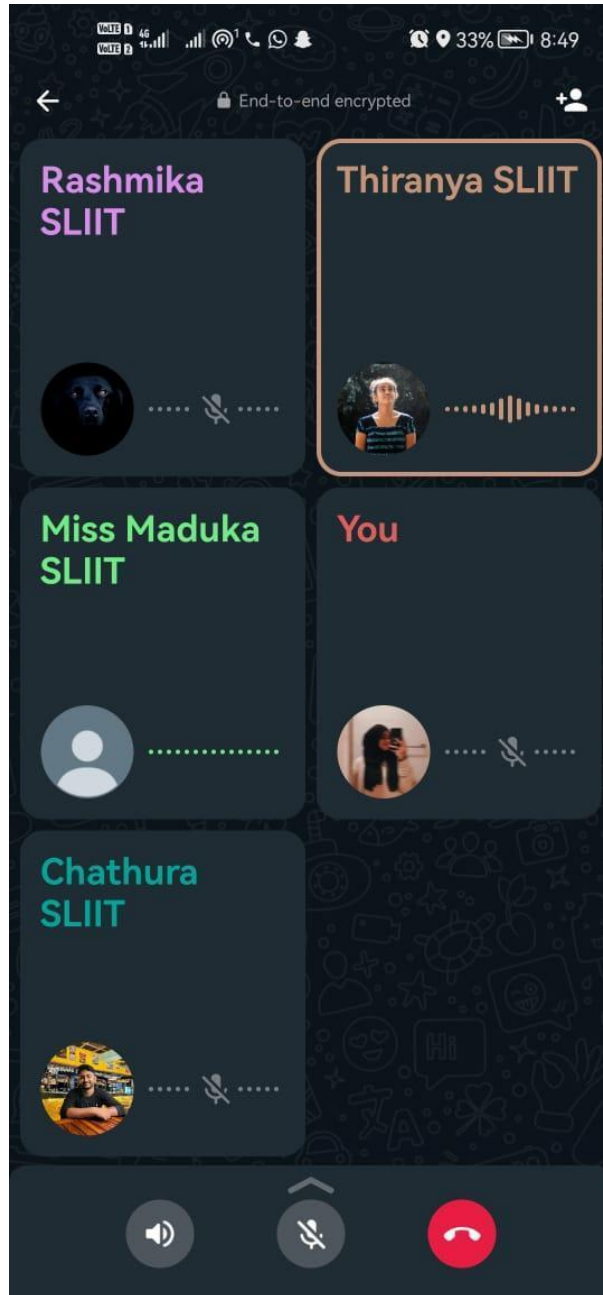


Figure 7 - WhatsApp Meetings

02.2. Screenshots – MS Planner Project View

02.2.A. User Tasks Allocation

Data Collecting Tasks milestones

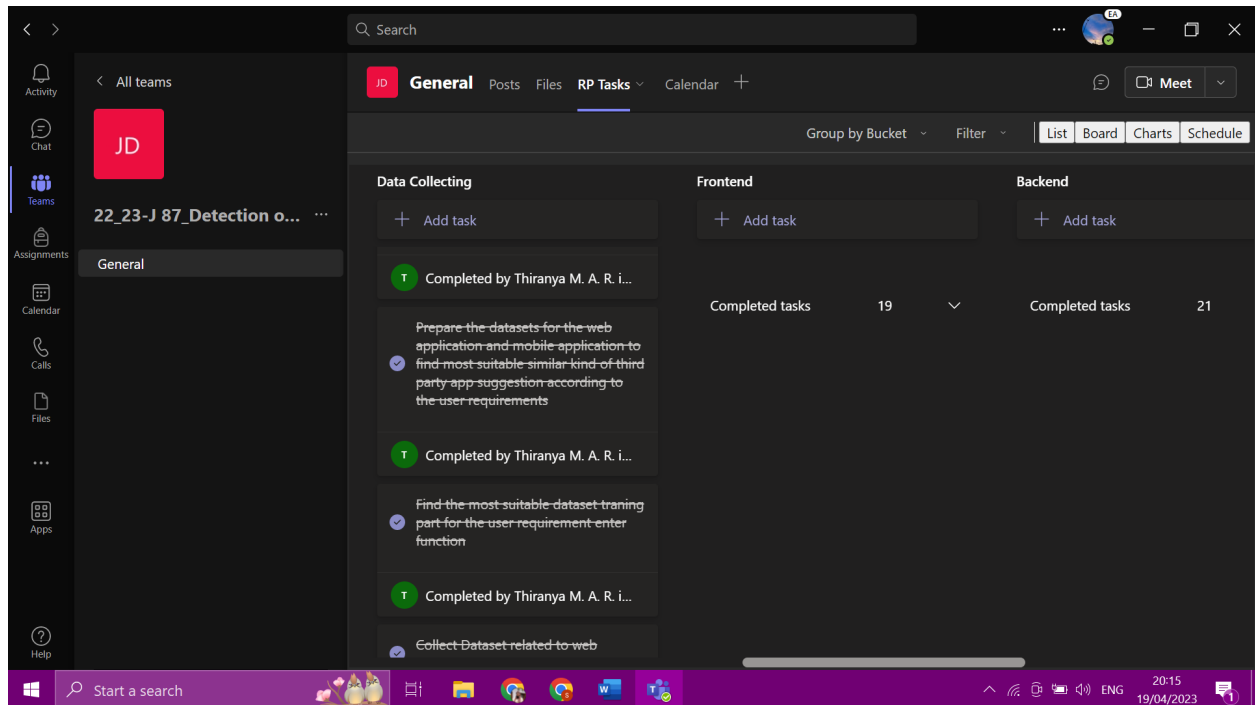


Figure 8 - MS Teams RP Board

Backend Development Tasks milestones

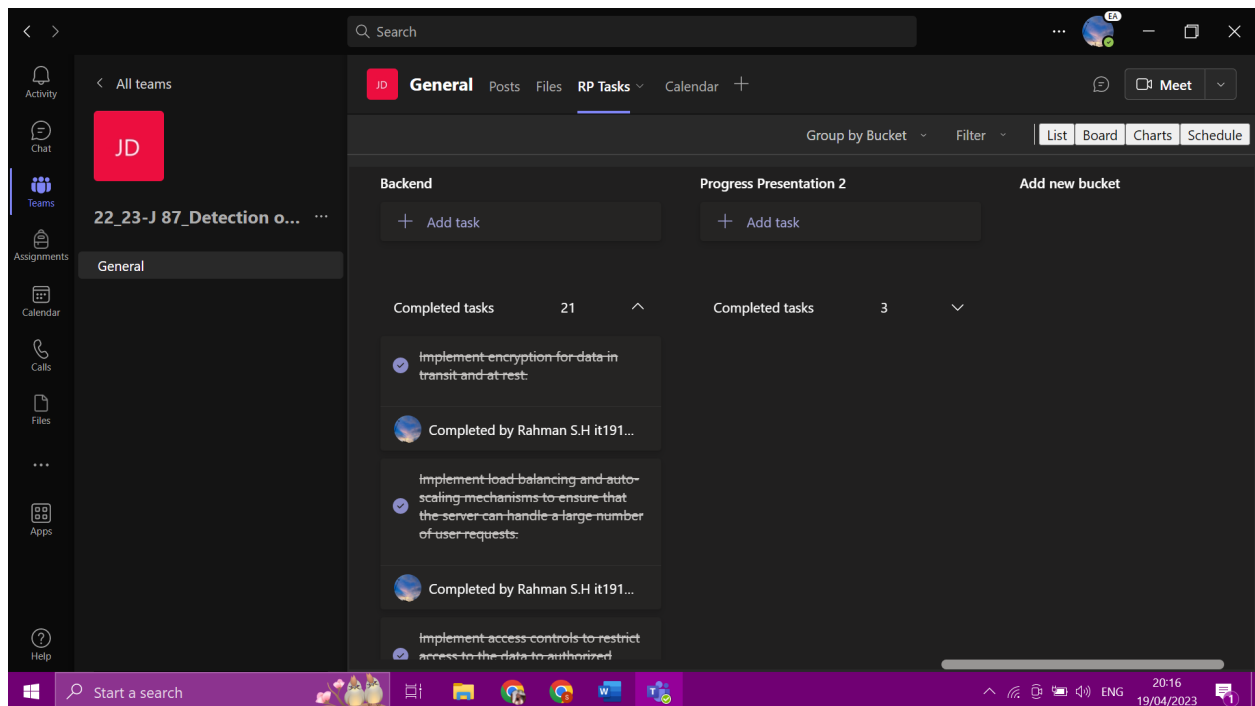


Figure 9 - MS Teams RP Board

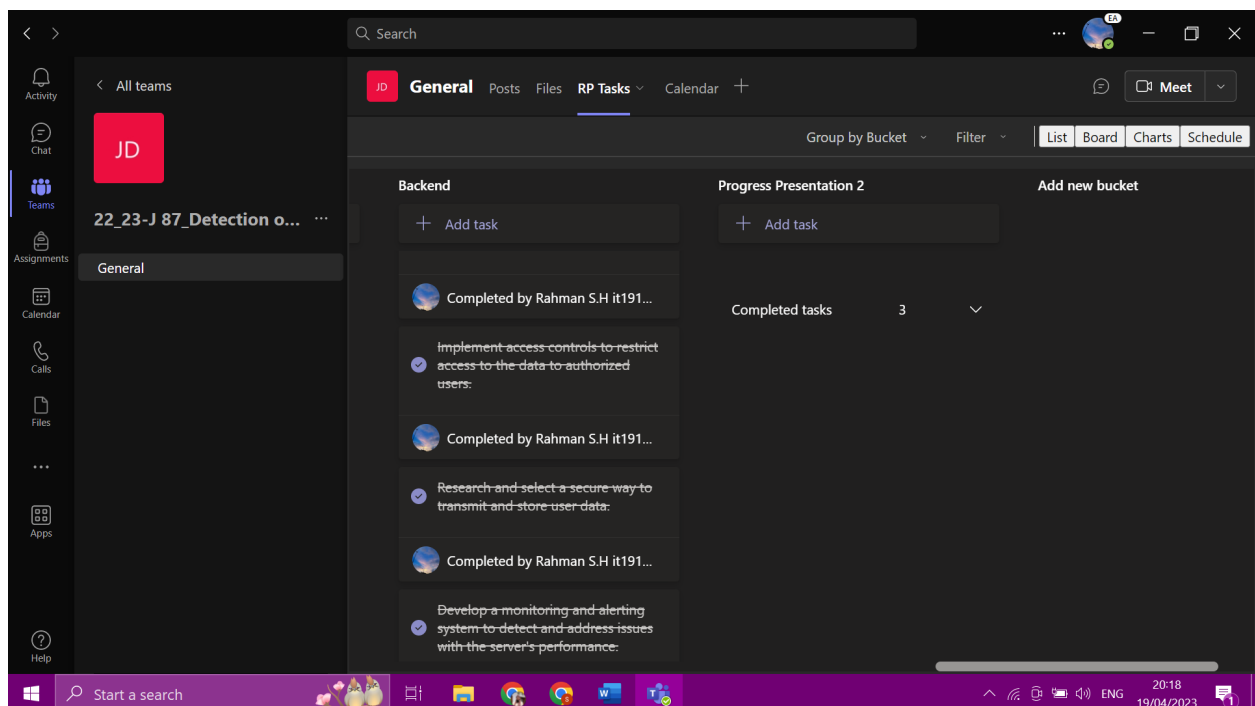


Figure 10- MS Teams RP Board

Fronted Development Tasks milestones

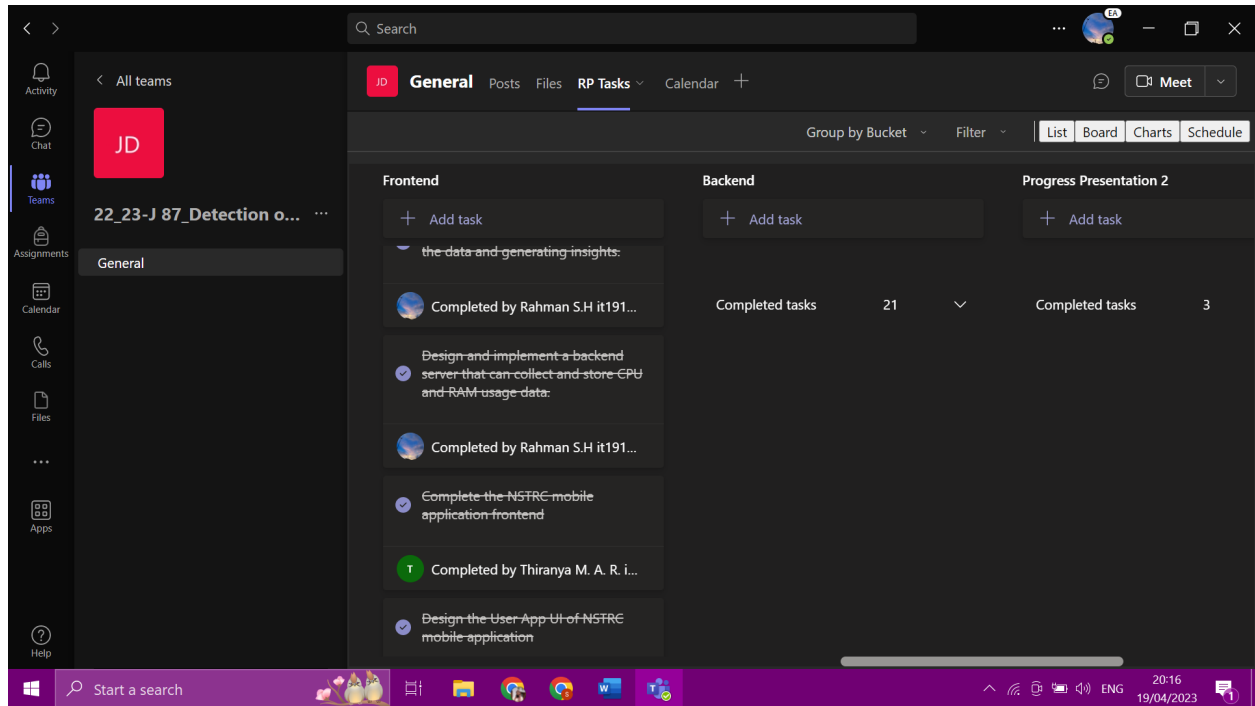


Figure 11- MS Teams RP Board

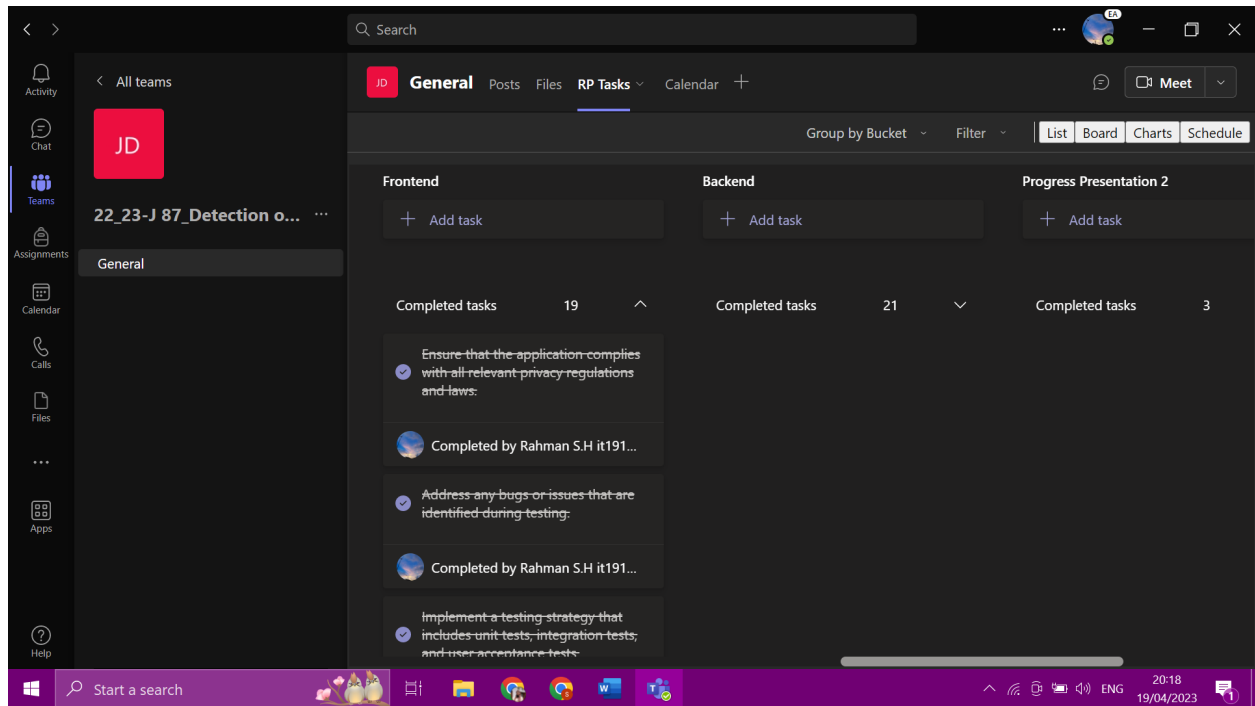


Figure 12- MS Teams RP Board

02.2.B. Project Overall View with Charts

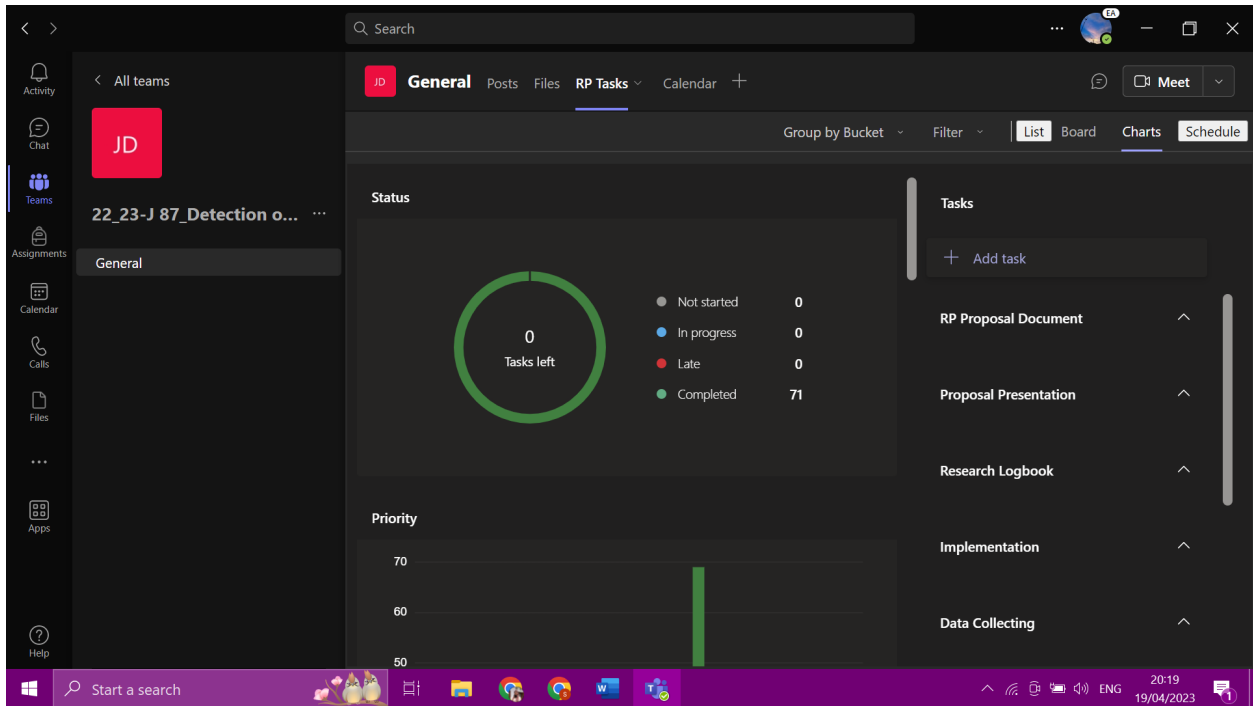


Figure 13 - MS Teams RP Chart View

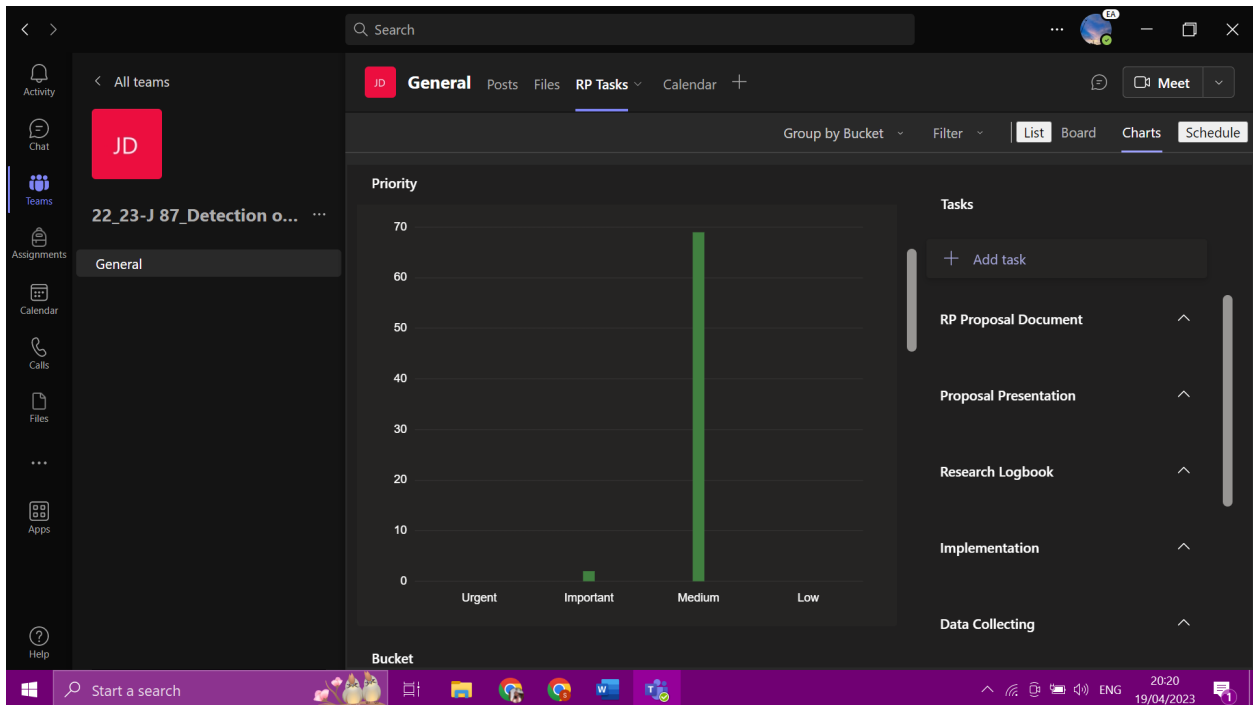


Figure 14 - MS Teams RP Chart View

03. Gantt chart

Predicted

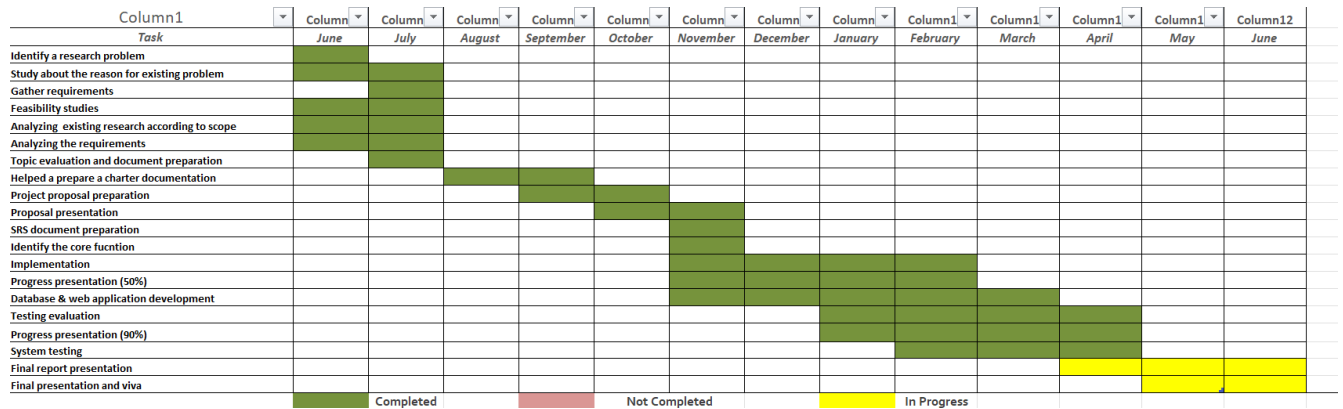


Figure 15 - Predicted Gantt Chart View

Actual



Figure 16 - Actual Gantt Chart View

04. Work Breakdown Structure

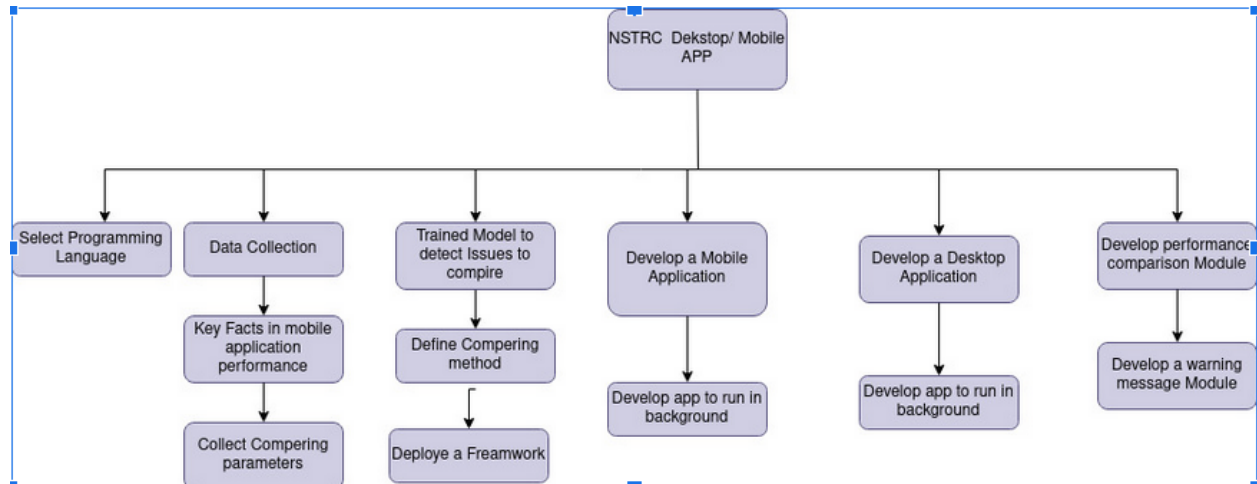


Figure 17 - Work Breakdown Chart

05. 90% completion of the project - Screenshots

Gigabit Javascript developer code Scanner

defects:0.021032548035212185

Code overall Complexity:

McCabe's lines of code:	13	McCabe's cyclomatic complexity:	
Halstead's volume:	62.26976913547135	Halstead's program difficulty:	2.25
McCabe's essential Complexity:		Halstead's effort:	140.10698055481055
McCabe's design complexity:		Halstead's program length:	28.75488750216347
Halstead's total operands and operators:	18	Halstead's intelligence:	27.67545294909838

Put your code here..

```
let a = 2;
if(x>1){
  let b = 8;
}
class Point {
  def constructor(x, y) {
    this.x = x;
  }
}
```

Analyze my code Check Defects Check overall complexity

Figure 18: Software program defect, overall complexity prediction

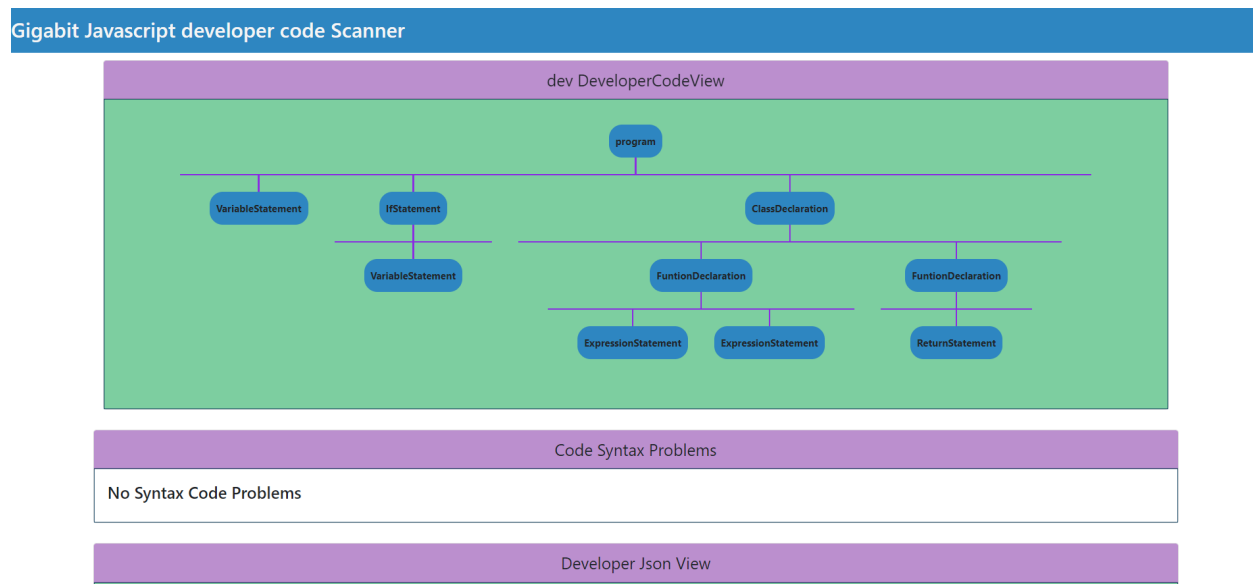


Figure 19: Software Program Abstract View Drawer

Developer Json View

```
{
  "type": "Program",
  "body": [
    {
      "type": "VariableStatement",
      "declarations": [
        {
          "type": "VariableDeclaration",
          "id": {
            "type": "Identifier",
            "name": "a"
          },
          "init": {
            "type": "NumericLiteral",
            "value": 2
          }
        }
      ]
    },
    {
      "type": "IfStatement",
      "test": {
        "type": "BinaryExpression",
        "operator": "+",
        "left": {
          "type": "Identifier",
          "name": "a"
        },
        "right": {
          "type": "NumericLiteral",
          "value": 2
        }
      },
      "consequent": {
        "type": "BlockStatement",
        "body": [
          {
            "type": "VariableStatement",
            "declarations": [
              {
                "type": "VariableDeclaration",
                "id": {
                  "type": "Identifier",
                  "name": "b"
                },
                "init": {
                  "type": "NumericLiteral",
                  "value": 1
                }
              }
            ]
          }
        ]
      },
      "alternate": {
        "type": "BlockStatement",
        "body": [
          {
            "type": "VariableStatement",
            "declarations": [
              {
                "type": "VariableDeclaration",
                "id": {
                  "type": "Identifier",
                  "name": "b"
                },
                "init": {
                  "type": "NumericLiteral",
                  "value": 3
                }
              }
            ]
          }
        ]
      }
    }
  ]
}
```

Figure 20: Software Program Deep view