SIH 2020

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Problem Statement:

Issued by: Govt. of Sikkim

Domain: Agriculture and Rural Development

There is no monitoring system to monitor the progress of construction of houses under Rural Housing scheme. To generate **real time statistical report** of the ongoing constructions. Design web based dashboard for monitoring and a native mobile application to track the progress of the construction just by taking a photograph by using the application itself.

Abstract

To analyse a physical project and generate a progress report an “Image” is the main requirement.

Different images taken at different time intervals can help us learn the progress of a project and generate statistical report accordingly. This would help the main authority to keep an eye over the construction projects progress and ensure the completion within due time period.

Objective:

- To check the progress of a construction project continuously.
- Compare the progress with the expected progress after certain intervals of time.
- Reduce corruption involved in housing plans of government.
- Automating the progress evaluation and project completion within due time.
- Automating the progress report generation.

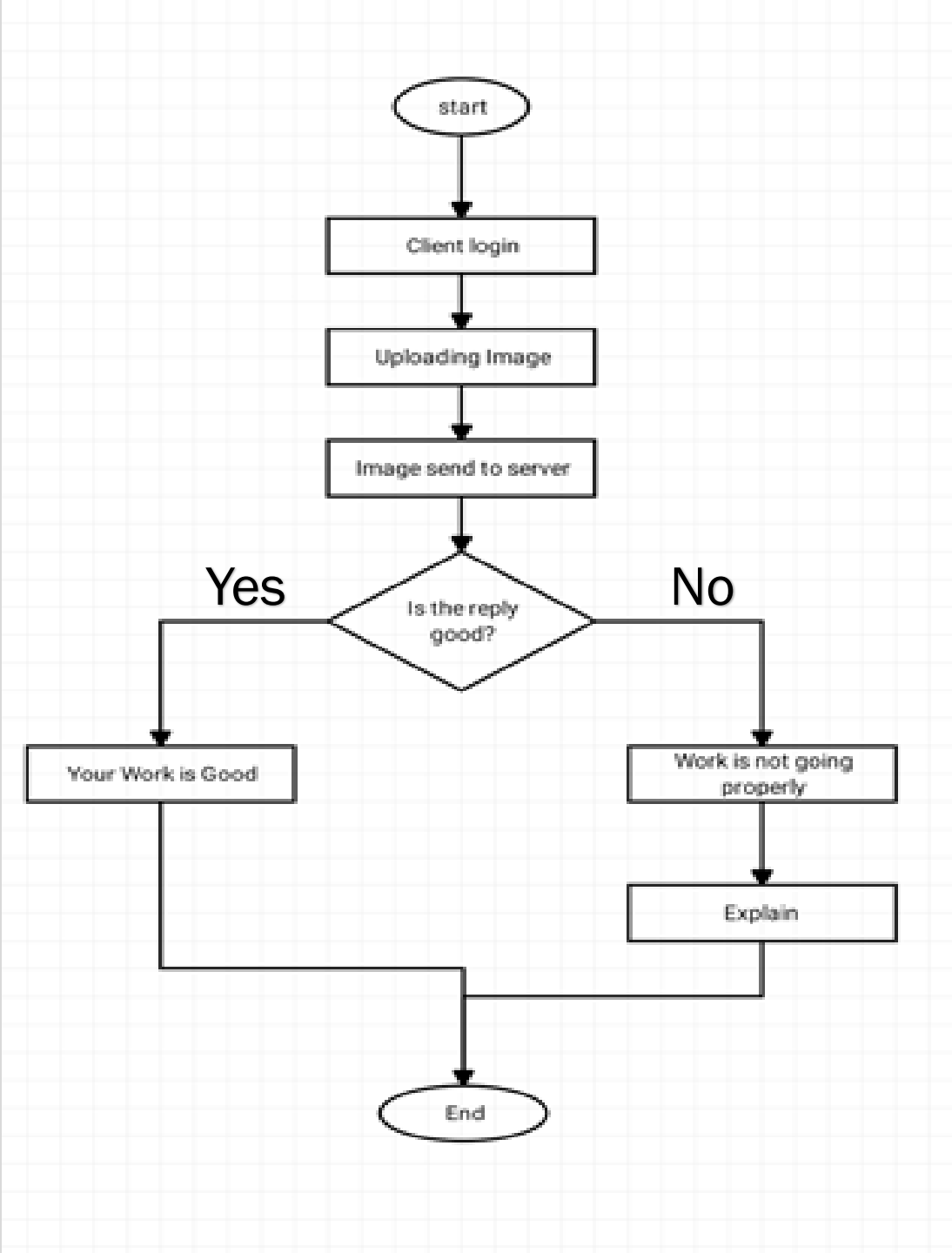
Solution

The different images received at different time intervals are compared to the standard/expected completed project.

Accordingly, the statistical report is generated timely with the image difference both graphically and percentage difference in images.

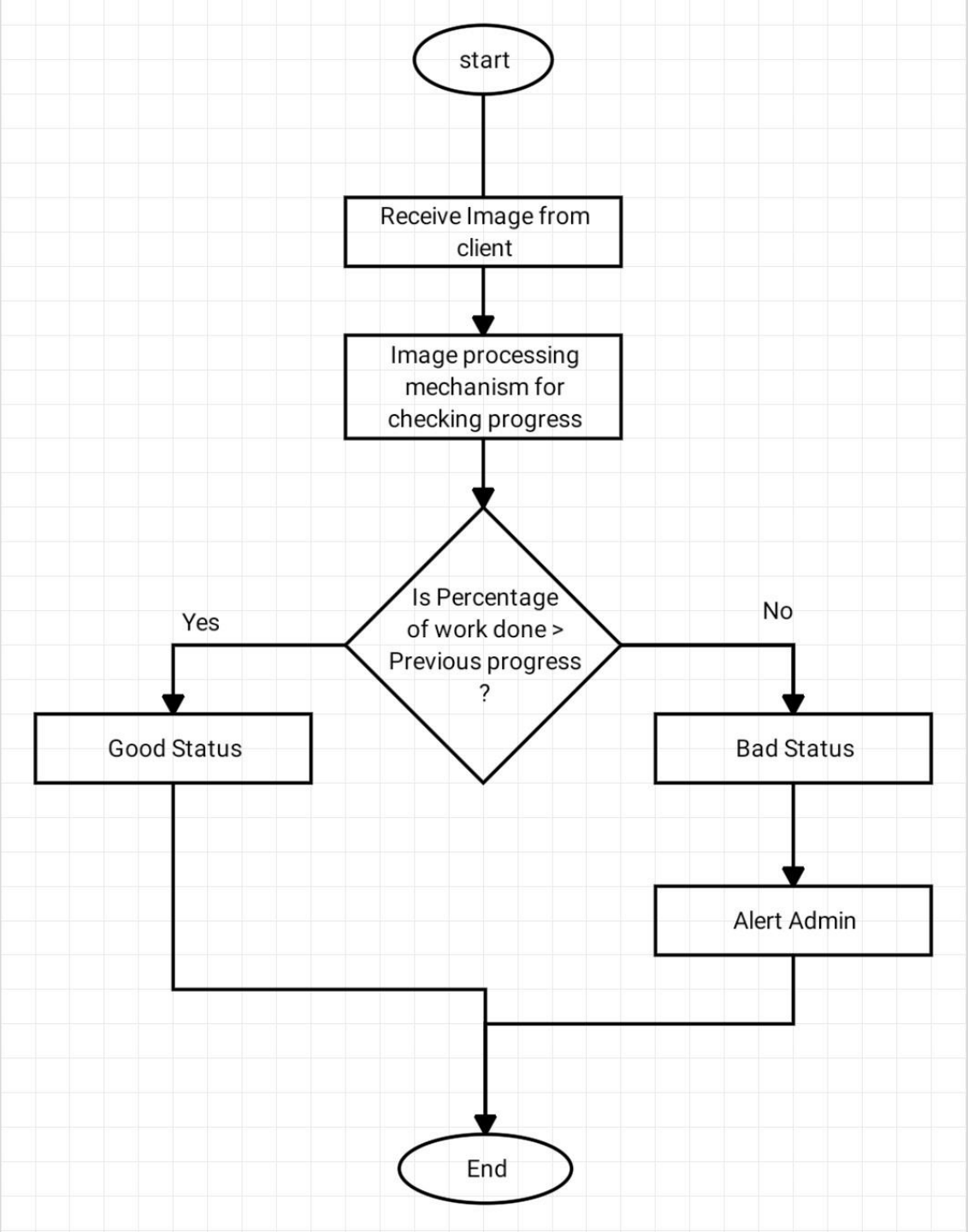
Flowcharts

- Client Side

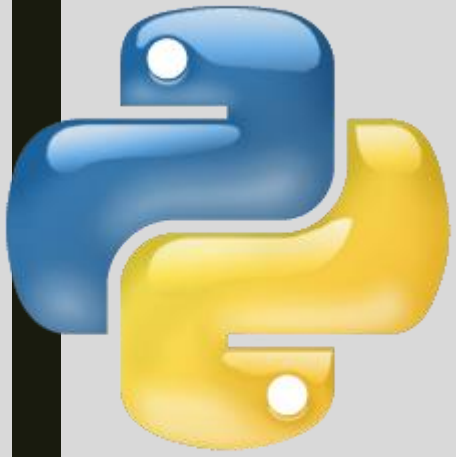


Flowcharts

- Admin Side



Technology Stack



Conclusion

Percentage Comparison: 58.2%

Percentage Comparison: 64.4%

Percentage Comparison: 67.2%

Percentage Comparison: 68.6%

Percentage Comparison: 100%

References

1. https://www.tutorialspoint.com/dip/index.htm
2. https://sourceforge.net/projects/opencvlibrary/
3. https://scikit-image.org/