**R. V. COLLEGE OF ENGINEERING**

**(AUTONOMOUS INSTITUTION AFFIIATED TO VTU, BELAGAVI)**

**DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**

**APPROVED BY ALL INDIA COUNCIL FOR TECHNICAL EDUCATION, NEW DELHI**

**ACCREDITED BY NATIONAL BOARD OF ACCREDITATION, NEW DELHI**

**APRIL 2018**

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**A Project Report on**

**SMART WATER METER**

**Submitted in Partial Fulfillment of the Requirement**

**for the V Semester MCA Academic Minor Project - II**

**By**

**Vageesha k m (1RV16MCA47)**

**And**

**Vijay Babu(1RV16MCA53)**

**Under the Guidance of**

**Dr. Renuka Prasad B**

**Associate Professor & Associate Dean**

**Department of M.C.A,**

**R.V. College of Engineering**

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**JANUARY 2019**

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**CERTIFICATE**

This is to certify that the project entitled “**Smart Water Meter”** submitted in partial fulfillment of Minor Project-II (16MCA\_\_) of IV Semester MCA is a result of the bona-fide work carried out by **Vageesha k m(1RV16MCA47) and**

**Vijay Babu(1RV16MCA53)** during the Academic year 2018-19.

**Dr. B. Renuka Prasad Dr. Andhe Dharani**

**Associate Professor & Associate Dean Professor and Director**

**Department of MCA Department of MCA**

**R.V.College of Engineering R.V.College of Engineering**

**Bengaluru – 560 059 Bengaluru – 560 059**

**UNDERTAKING BY THE STUDENT**

**WE, Vageesha KM(1RV16MCA47) and Vijay Babu(1RV16MCA53) hereby declare that the Minor project-II “Smart Water Meter” is carried out and completed successfully by us and is our original work.**

**SIGNATURE**

VAGEESHA KM (1RV16MCA47)

**SIGNATURE**

VIJAY BABU(1RV16MCA47)

**ACKNOWLEDGEMENT**

We would like to express sincere thanks to our internal guide Dr. Renuka Prasad B, Associate Professor & Associate Dean, Department of MCA, R V College of Engineering for his guidance and valuable advice from time to time.

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VAGEESHA KM (1RV16MCA47)

VIJAY BABU(1RV16MCA53)

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**SYNOPSIS**

Attendance management system has become an important software in an organization. The System helps to keeping track of employee’s attendance, login and logout time. But the main problem is the transparency the in system, this creates a trust issue between the organization and its employee. This system is not only for big organization but can be used in schools, colleges, small organizations and office who face the same problem.

To this problem our attendance management system try’s to give the solution by creating an Android Application for the employee to track their attendance, login and logout time every day.

Objectives of the project

* Bring transparency between employee and organization about attendance
* Create a better attendance management system using facial recognition and RFID
* Increase efficiency and effectiveness of attendance management system using better technology
* Create generic attendance management system

The system uses Facial Recognition and RFID technology to mark the attendance of a employee. Both of the technology’s help to create a better fool proof system. Every employee should have a identification card which has RFID embedded and latest photo of the employee is stored in the system for facial recognition. When the employee enter the organization instead of requiring people to place their hand on a reader or precisely position their eye in front of a scanner, face recognition systems takes a picture of employee face as there RFID is authenticated when entered the organization. This information is stored in Firebase which is a cloud based database. Firebase provides all the system level services like concurrency control, back-up etc. Firebase is a product of Google which make the database accessible through the world. Facial recognition analyzes the characteristics of a person's face in images through a digital camera. It measures the overall facial structure, including distances between eyes, nose, mouth, and jaw edges. These measurements are retained in a database and used for comparison while marking attendance. The system create an efficient, effective, cost reduction ,less time consuming attendance management system. This system can be placed at multiple entries and exits of an organization.