

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,  
BELAGAVI - 590018**



**PROJECT REPORT ON**

**KNAPSACK SOLUTION FOR CASH WITHDRAWAL PROBLEM IN  
AUTOMATIC TELLER MACHINE**

**SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE OF**

**BACHELOR OF ENGINEERING**

**IN**

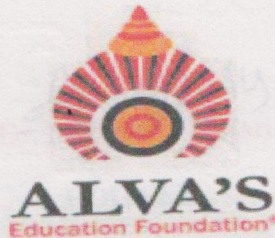
**COMPUTER SCIENCE AND ENGINEERING**

**BY**

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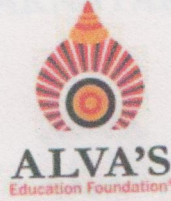


**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
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**2018 - 2019**



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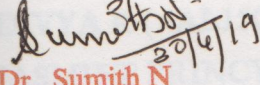
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
CERTIFICATE

This is to certify that the Project entitled **"KNAPSACK SOLUTION FOR CASH WITHDRAWAL PROBLEM IN AUTOMATIC TELLER MACHINE"** has been successfully completed by

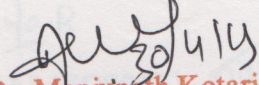
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the bonafide students of **Department of Computer Science & Engineering** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2018-2019. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

  
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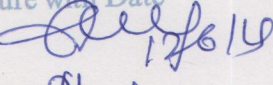
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12/6/19  
12/6/19



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## 2 Literature Survey

### Abstract

Since the banks are not open 24x7, there was a need for customers of the bank to withdraw cash anytime during the day. So, the Automatic Teller Machine can satisfy this need. There may be situations where you need emergency cash and your Automatic Teller Machine (ATM) is not able to dispense cash of desired amount. This may be due to insufficient currency or lack of availability of the required denominations.

Now, imagine that your ATM is smart and it helps you to withdraw cash easily. It does so, by giving you an amount that is nearest to the requested amount. It can use either the dynamic or greedy technique to map the requested amount to the nearest amount it can dispense. We have to make sure that the transaction is legitimate and also that the cash requested by the customer is for an emergency. For this purpose, the proposed system adds a module to dispense cash in the above mentioned scenario.

## 3 System Analysis

### 3.1 Feasibility Study

### 3.2 Economic Study

### 3.3 Technical Study

### 3.4 Social Study

## 4 System Design

### 4.1 System Architecture

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### 4.4 ER Diagram

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