Generating Uniqueid And Bar Code For Database System

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Abstract- The purpose of Bar code based fees management system is to automate existing manual system by the help of computerized equipment and full-fledged computer software,satisfying their necessities, So that their valuable information/data can be put away for a longer period with simple getting to and controlling of the equivalent. The required software and hardware are easily available and easy to work with.

Bar code based fees management system, as described above, can lead to error free, secure, reliable and fast management system.It can help user to focus on their different exercises rather to focus on the record keeping. The association can keep up electronic records without information redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

Basically the project describes how to manage for good performance and better services for the clients.

Keywords- Bar code based fees management systems, Bayesian algorithm, code 128.

I. INTRODUCTION

The "Bar code based fees management system" is been creating to abrogate the issues happening in the manual system. The system is going to use for taking out or lessening the hardships looked by this current system. In addition this system is intended for the specific need of the college to do tasks in the smooth and powerful way.The system is planned to reduce errors however much as expected while entering the information.

In this system, the client is an administrator who will sign in with the given id and secret phrase.

After that the system is ready to scan Bar code and get fees or manage fees according to their departments, year, semester wise. The system scan the Bar code from student's id card then it opens a window of student's information.

The admin then have access to manage fees of that student. The admin can get fees details, get fees from student and enter details back into the system. Every organization whether big or small, has challenges to overcome and managing the information of course, Student, Semester, Payment, Fees.

This is configuration to aid a key arranging, and will enable you to guarantee that your association is outfitted with the correct data and subtleties for your future objectives.

In the present system, an student enrolling must initially go to the college to experience the procedures. Students are relied upon to store check or investors draft at the money office before a slip is printed out to take to the Faculty Officer. Amid the enrollment, every student is approached to give some essential individual data, for example, his/her record number to start the enlistment procedure. The student is then given the enrollment printout and made to affix his mark in a book to affirm his enlistment. The printout demonstrates the date and time of enlistment, courses subtleties.

This is done in the initial two weeks of reviving, as an enlistment focus is opened. After that period, understudies need to go to the workplace of the Faculty Officer to be enlisted. A Student who does not fulfill the time constraint pulls in a punishment relying upon the quantity of days after the due date, particularly proceeding with understudies. For the fresh students, there is a time frame after which you are not allowed to register.

The current system requires the physical presence of the student on campus. The student goes to the registration centre to continue the registration process after payment of the required fees.

1.1 Bar code

Bar code is a visual portrayal of data as bars and spaces on a surface. The bars and spaces are organized with different widths and involve numbers, characters and pictures, for instance, spot, colon and others. Diverse blends of these alphanumeric characters are utilized to speak to data. There

are different sorts of Bar codes being used today for example Code 128, Code 39, EAN and so forth. The effective of Bar code innovation has been always improving so as to suit more data in the base conceivable space.

Today Bar codes are generally utilized on books and at retail locations so as to monitor the items accessible and simple checkout of the items. The standardized tags are ordinarily perused utilizing scanners utilizing laser bars or cameras.

By and large,bar codes are images molded as square shapes which comprise of meager or thick parallel lines parallel to one another. Standardized tags give intends to programmed quick information contribution to the PC. Since the a decade ago, Bar codes are being utilized in numerous zones, for example, showcase items and electronic gadgets. The lines on Bar codes contain the reference number of the item. This data ought to be recorded in PCs to store every item independently to check organization deals and buy amounts. When perusing Bar codes on items utilizing some laser examining gadget, a flag is created by the system and handled in the PC by programming. By then this information is used to make sense of which thing is picked. This procedure gives fast and dependable deals chances to organizations for selling their items. There are a few kinds of Bar code that being utilized inside the modern field these days. A Bar code imagery characterizes the specialized subtleties of a specific sort of Bar code incorporates width of bars, character set, technique for encoding and checksum particulars. Standardized identification types can be characterized into four kind of classification and those classes are numeric-just Bar codes, alpha-numeric Bar codes, 2D Bar code and industry standard for Bar code and marks.

1.1.1 CODE 128

For Bar code based system we need Bar code type CODE 128. Code 128, or Code128, was presented in 1981 as a significantly more effective option in contrast to more established Bar codes like Code 11, Code 39, and Codabar. Unlike its antecedents, which are constrained to a subset of alphanumeric and image characters, Code 128 can be utilized to speak to the full ASCII character set (characters 0 through 127).

Code 128 is frequently alluded to as GS1-128 (some time ago UCC/EAN-128), which is a broadly upheld application standard in the delivery and bundling businesses. Code 128 is a direct, or one-dimensional (1D) Bar code. This implies the Bar code is made out of a solitary arrangement of shifting width vertical lines and spaces. The information in

the Bar code is spoken to straightly by these dark/white (bar/space) patterns. Below fig.: 1 is a straightforward model.

Fig 1: Bar code CODE-128

Every image in a Code 128 Bar code has 6 components: 3 bars (dark) and 3 spaces (white), except for the stop image, which has 7 components (4 bars and 3 spaces). It utilizes 108 distinct images: 103 information images, 3 begin images, and 2 stop symbols. It characterizes three different character sets or character modes (128A, 128B, and 128C). Each information image speaks to an alternate character contingent upon which character set is dynamic; the underlying character mode is set by the begin character (which is the reason there are 3 diverse ones). Special images are utilized inside the information message to change to an alternate character set if needed. These changes are called shifts(switch to an alternate character set for the following image just) and latches (shift to an alternate character set for every single ensuing image).

Code 128 is generally bolstered, with most business Bar code scanners being fit for perusing it. Its high-thickness and ASCII 127 help make it perfect for a wide assortment employments. Its symbols are more complex to generate than less capable symbolize like Code 39 (since they support multiple character sets and require a checksum), so encoding software is often used in conjunction with specialized fonts.

1.2 UNIQUE ID GENERATION

The Bar code based fees management system generate unique number for each and every student. There is a method to generate the unique number. The unique number shaped by the addition of the considerable number of numbers created by time stamp and their entrance number in the system.

1.3 SCAN Bar code

We print the generated Bar code on student's ID card. We require one scanning machine to scan the bar code. The scanner will scan the the Bar code as shown in the fig.
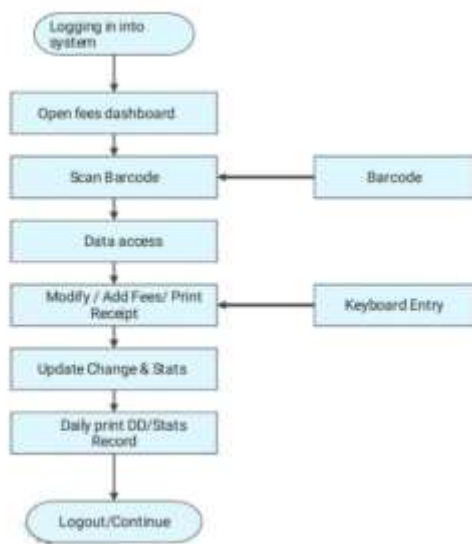
Fig 2: Scanning ID Card

Fig 3: Flowchart of system

II. METHODOLOGY

Firstly, image that contains the Bar code information is acquired by using a Bar code scanner. The colour image contains in fact the full usable information.
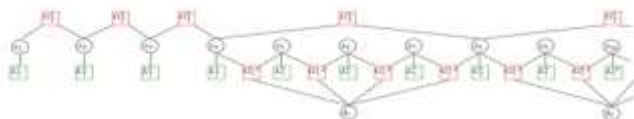

Fig 4: Variables are drawn as circles and factors (interactions among variables) as boxes. Factors enforcing geometric constraints are drawn in red and factors incorporating scan-line edge information drawn in green.

The image is then being converted to grayscale format. The picture is changed into a pre-handled grayscale picture for decreasing commotion and upgrading the picture differentiate among bars and spaces. A Bar code-encoding grouping at that point is produced from the binarized succession, in which each Bar code bar module and each Bar

code space module are spoken to by a solitary particular piece in the Bar code-encoding arrangement. The Bar code encoded data is removed from the Bar code-encoding grouping.

2.1 Bayesian model

We have contrived a Bayesian deformable format model of the Bar code that joins earlier learning of Bar code geometry, including the permitted arrangement of bars and taking into account geometric twists, with proof for edges dependent on power slopes. Our model is additionally fortified by abusing the checksum data em-slept within the Bar code, which obliges the estimations of the encoded digits, along these lines enabling us to identify and address single-digit blunders. In this paper we practice to specific imagery that is normally utilized in North America, the UPC-A, however, we accentuate that our methodology will sum up clearly to any 1D Bar code design.

2.1.1 Model Basics

In this paper we assume that the bar code has been segmented from the image, and that we know the approximate orientation, which allows us to construct several scanlines across the bar code.

We first describe the model for a single scanline cutting from left to right across the bar code; later we will extend the model to multiple scanlines. In addition, in later sections we will describe two variants of the basic model, Model 1 and 2.

The scanline defines an x coordinate system, and the intensity along the scanline is denoted $I(x)$. The edge strength $e(x)$ is defined as the intensity derivative dI/dx.

Local maxima and minima of $e(x)$ define the edge locations in the scanline, and the first and last observed edge locations spanning the entire bar code (of width 95Δ) are used to estimate for the scanline. We denote all the information in the scanline by S.

The areas of all $N = 60$ edges are indicated by the grouping $X = (x_1, x_2, \ldots, x_N)$. We signify the fixed edges in X by X_F, and the variable edges by X_V, so that with a slight maltreatment of documentation we can compose $X = (X_F, X_V)$. The obscure digits are indicated by the grouping $D = (d_1, d_2, \ldots, d_{12})$, where $d_I \in \{0, 1, \ldots, 9\}$. The basic model, $P(X, D|S)$, can be described as a factor graph (see Fig. 3) of the following form:

$$P(X, D|S) = \frac{1}{Z} e^{-L(X, \delta) - G(X, D)} \qquad (1)$$

III. CONCLUSIONS

This paper has proposed In this advanced financial asset management is specified which generally uses Bar code as single input to retrieve whole data account of an individual. Main aspect of this is ease using Bar code and integrity using encryption during transfer. The technique going to use is only printed Bar code of any size. Bar code is used to get the hidden unique key. There is no need of publically known private/hidden key like UID (Unique Identification Number) given to each student.

Objective of any fees acceptance system is manage financial assets in such a way that it should become easy to manage payments. Database is used to keep entries using this fees data and all records are kept the confidentiality.

Our system is not quantitative but qualitative, so it has the merit that users can easily pay fees to the college with true fee receipt made accordingly government and organizational aspects

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Website: www.ijircce.com
Vol. 5, Issue 3, March 2017
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