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ATCVM.cpp

Sample format:

Size: 2018 * 1012

BANK NAME	__ / __ / _____

Funds	Multiples
1,00,00,000	○○○○○
10,00,000	○○○○○
1,00,000	○○○○○
10,000	○○○○○
1,000	○○○○○

Payee :_____

A/C no : 123456666

Payee fingerprint

OTHER BANK DETAILS

Payer fingerprint

Account creation :

```
Int128_t pre_deposit = 1000000000;
char name1[]="JACK",name2[]="JAMES",
                    name3[]="HENRY",name4[]="OLIVIA";

pp[100].set(name1,12345666,pre_deposit);

pp[101].set(name2,12345777,pre_deposit);
pp[102].set(name3,12345888,pre_deposit);

pp[103].set(name4,12345999,pre_deposit);
```

Account's are created in that way with the pre deposit's

Check program ATCVM.cpp for that,

Program line : from 368.

For Example:
Let's work with this copy.

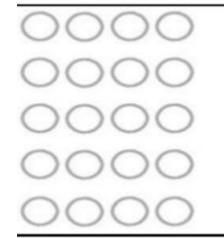Path:~/Automated-Cheque-Processing/Prototype/upload_doc

When the program ask you to upload document
Upload in that path with the similar name of "sample.jpg"

CROPPING :

1. Pre cropped img by name a. shri.jpg and b. mali.jpg
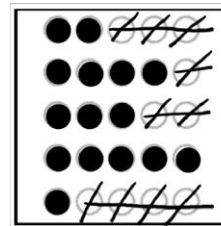
a.   b.

2. OMR cropped & then divided into 5 sections

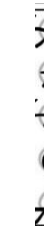c.   d.   e.   f.   g.   h.

Path : ~/Automated-Cheque-Processing/Prototype/src/omr_generator

Left side and right side fingerprint impressions are cropped.

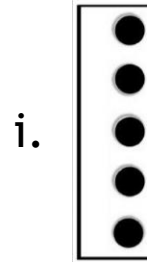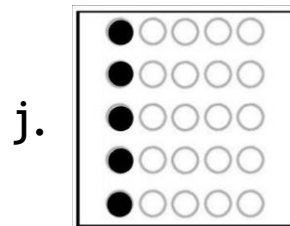Γ.   Ω.

Path : ~/Automated-Cheque-Processing/Prototype/src/fingerprint

MERGING :

3. Then 'a' and 'd' are merged.

i.

After that step, i. & b. Are merged

j.

Path : ~/Automated-Cheque-Processing/Prototype/src/merge_img

ANALYSING :

4. Now the 'j' omr is analysed With omr grading technique.

Marked bubbles omit as 1,
Unmarked bubbles or out of the bubble range omit as 0 .

1st bubble's row result, Is stored in crore.txt file
2nd bubble's row result, Is stored in tenlakh.txt file
3rd bubble's row result, Is stored in lakh.txt file
4th bubble's row result, Is stored in tenthous.txt file
5th bubble's row result, Is stored in thous.txt file

Path : ~/Automated-Cheque-Processing/Prototype/src/funds

After that, those results are read by program and Stored into it, And every time it is incremented by '0' or '1', when it collect's the data from those file's again.

The same process is again applied, to the divided section's 'e', 'f', 'g'

As soon as it complete's , then the total incremented of crore, ten lakh, Lakh, ten thousand, thousand are multiplied with their respective funds(it is shown in sample image).

NOTE : 1 small error, The python program output 1 for unmarked bubbles row too, it works when a single bubbled out of five marked

COMPARING :

5. Γ and Ω fingerprints are compared with the fingerprint database.

After successful comparison,
Funds from respective detected accounts
are credited and debited.

Path : ~/Automated-Cheque-Processing/Prototype/src/comp_fins

EXECUTION :

6. At the end The user can know his updated
balance.
And exit from the window

The message to the payer will be sent through sms
or mail, Which is not accessible by payee.

Just to show you I have added that option.

Note : Main things almost covered, two simple Things not included.
1. Date verification which is simple can be done while builting prototype.
2. Last fingerprint Impression verification.
relevant data like diagram, flowchart of working mode and why you need to
choose are project? are in the main File
"auto cheque PPT updated.pptx" which you had checked in 1st round.

Technologies :

Used in this prototype

- C/C++ programming

- Python

Note : I couldn't Add Azure services in the prototype and could not make video, Because I don't have sophisticated device's due to personal family issues, I had only one Android phone, I have did my best.

Now you can check my program and you will understand that we can use the Azure services to those two database's,
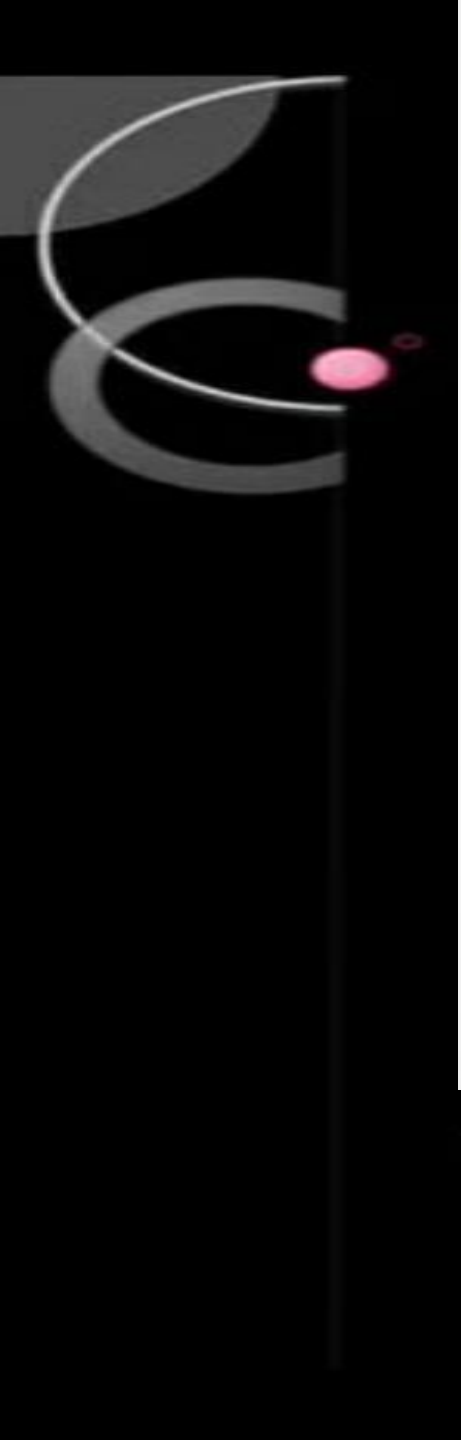And much more.

Thank you

Ideas:

- We can make it as "One machine multiple bank access"
- Generating passive income when other bank cheque's inserted.

Note : Whiling making this project I'm studying 1st year B.tech , I might be unaware of best technologies.
Take into your consideration, plz mind it.

Your faithful
Hariom
Mali