**Chapter – I**

**INTRODUCTION**

**INTRODUCTION**

**ATM Software** is an academic project developed in Python scripting language which resembles the existing ATM (Automatic Teller Machine) software. The main aim of the project is to demonstrate the practical implementation of Python programming language in banking sector. The software generated by the proposed project can be installed in Bank ATMs.

## ATM Software Project Abstract:

The proposed Python project is an engineering approach to enhance current banking activities. The software works as a controller of the ATM machine during transaction of money. The implementation of project is beneficial to both the [bank](https://www.codewithc.com/online-bank-management-system-project-java/)s and the costumers.

The development of technology has carried drastic change in all sectors and one of them is bank. The present money transaction process completely differs from the older traditional method using checks and tokens. Nowadays, people prefer different cards such as VISA, MASTER CARD, etc. to withdraw money from bank. This is possible only though Automatic Teller Machine with a properly installed software.

The use of a software in ATM machine creates ease and a comfort in money transaction. One can withdraw money at any place provided with an ATM center. It reduces the risk of losing money, and being stolen and cheated. The use of software helps in safe, reliable and secured banking.

ATM stands for **Automated teller machine**. Presently this is one of the most improvised ways of transaction. As people do not feel comfortable to carry huge amount of money, they use **ATMs**. By adding new features and also increasing the security issues it may provide more supremacy than it today. As a result life becomes reliable and lighten up.

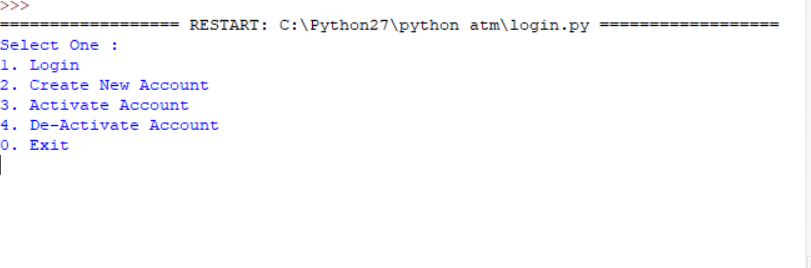
After the implementation of project in bank, the numbers of daily costumers visiting the bank for withdrawing money is effectively reduced. As a result of this, the working load in the bank is obviously reduced and the numbers of account staffs in bank office can be decreased. Thus, the project carries an economical balance in [financial activities](https://www.codewithc.com/finance-management-system-project-vb-net/) of bank.

The major modules of the ATM project are: admin module and user module. Admin refers to the bank that has installed the proposed ATM software project and the users are the costumers of bank with authenticated cards.

Menus are:

1. Login: Helps to login into an existing account.
2. Create New Account: This is use to create a new account.
3. Activate Account: Helps to activate the account.
4. De- Activate Account: Used to de activate the account.
5. Exit: used for exit the portal.

To conclude, ATM Software is a tool for safe and reliable transaction of money. The implementation of project reduces the crowd in bank and makes the overall banking transactions secured. The growing use of cards and online shopping confirms the good scopes and bright futures of this project.



**Chapter – II**

**LITERATURE REVIEW**

It is true that most inventions have happened due to sheer necessity and **invention of ATM** machine is one of them. Now the question that arises is what was the necessity, what called for the invention of a round the clock cash dispenser? Who invented it- a broke student or a shopaholic lady, a businessman or a banker, too tired of cashing the cheques? Also known as Cashpoint or Hole-in-the-Wall Machine (Britain), ABM or Automatic Banking Machine (USA), All-time Money (India), and Minibank (Norway) and so much more, the history of ATM is full of interesting facts, some we know, some we don’t.

 Let’s tear through the pages of history to know more. An Armenian named Luther George Simjian was forced to move to USA in the year 1920, under the account of Armenian Genocide. He owned to his credit the invention of a portrait camera and then rolled out the formulated idea of ATM, the Automated Teller Machine.

Confident of his invention, he persuaded Citibank to run his product on a six month trial basis. Soon enough, he was disappointed with the performance and the lack of users and concluded that ATM was a wasteful addition to personal banking. And lack of demand for the ATM finally forced him to take a back seat. Clear enough; the time was not right for this concept to have been accepted generously. Simjian clearly lost out on the success and fame and the same was passed on to two other gentlemen, John Shepherd-Barron and Don Wetzel.

John Shepherd-Barron was a Scottish national born in India. Later he relocated to Britain and pursued his education from the University of Edinburgh, and at Trinity College, Cambridge. After returning empty handed from the bank, Shepherd-Barron was disappointed to have no other solution to wait till the bank would open next. And thus in a similar fashion like Archimedes, Shepherd-Barron claims to have hit his Eureka moment while taking a bath. A self-sufficient cash dispensing machine was what he was thinking about. And soon the **ATM was invented** in the **early 1960s**. The invention of a self-sufficient cash dispensing machine was his second and successful attempt at inventions. Earlier he had invented an instrument to scare away seals at his Scottish Salmon farms. Unfortunately, this device instead of deterring the seals attracted them, and was a failure.

The **ATM machine** gained Shepherd-Barron an ever-lasting recognition in the banking world and paved the way for hi-tech banking techniques, online bank accounts and PIN and chip security technology. The four-digit internationally accepted standard PIN was also invented by him. Earlier, he had a six-digit Army serial number in his mind but later his wife suggested for a shorter PIN as it would be easy to remember. Finally in 1967 that the first ATM that dispensed paper currency round the clock, was unveiled. The ATM machine installed outside a Barclay’s bank in North London started dispensing cash on a 24 hour basis.

As the plastic cards were still to have come into existence, this machine accepted and generated money through cheques impregnated with certain chemicals. Majorly a mild radioactive substance, Carbon 14 was used for detection by the machine. Once the PIN was given, the machine gave out the cash. This radioactive substance had no ill effects on the health of users and Shepherd-Barron claimed that a user would have to eat about 136,000 cheques to suffer any kind of ill-effects. Reg Varney, a famous TV sitcom popular became the first person to use the ATM in the year 1967 and withdrew about 10 dollars. The amount seems too less for us, but this money was enough for a complete night out spent on the tiles in London, inclusive of dinner, drinks, a show and a taxi-ride back to home, in short enough cash for a “Wild Weekend”.

While this prototype device originated by Shepherd-Barron had started functioning, various parallel developments were happening in different parts of the world. An American Engineer Donald Wetzel of Docutel engineered the Docuteller ATM which was declared as the first modern magstripe machine. It recognized magnetically encoded plastic (credit cards) and not the usual paper cheques.

And there have been a lot of efforts gone into final development of the ATM, the ones we see today, the ones we use so frequently, and the ones which have made our lives revolve around plastic money. The development of ATM ever since its baby steps in the late 1930s and then gearing up for longer runs in the 1960s, and finally a matured and stable stage that we see the ATMs in today. Undoubtedly, most of the ideas and patents contributed for makeover of the ATM from time to time form the backbone of what was initiated as “holes in the wall”.

Today, ATMs hold a strong foothold in the world, offering everyone a better access to their money, be it in any corner of the world. Let’s put figures to assumptions, there are about 1.8 million ATMs in use around the world with ATMs on cruise and navy ships, airports, newsagents and petrol stations. ATMs too have been categorized as on and off premise ATMs. On Premise ATMs are capable to connect the users to the bank with multi-function capabilities. Off premise, ATM machines on the other hand are the "white label ATMs" and are limited to cash dispense, no balance enquiries, no statement print-out.

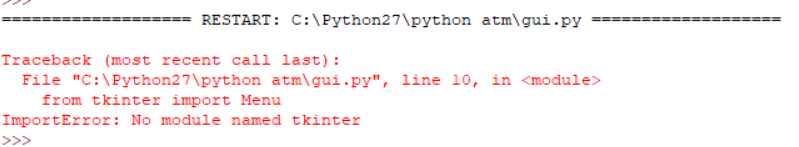
The developments have not stopped; the contactless technology is on its rise. Shepherd-Barron continued to take inimitable and lively interest in technology well even in his old age and had foreseen a future where plastic cards too would be numbered. For his excellent and unforgettable contributions to financial technologies, he was also offered the OBE in the year 2005. And in the year 2010, he took his last breath and left behind his legacy of technological advancements which would refuses to end. Many more inventions are in process and many will be successful too. The time is just right to bring in the glorious inventions rolling in.

**Chapter – III**

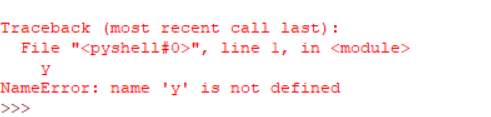
**PROBLEM IDENTIFICATION**

Some of the problem arises while running some of the code

[Python](https://www.python.org/) is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for [Rapid Application Development](https://en.wikipedia.org/wiki/Rapid_application_development), as well as for use as a scripting or glue language to connect existing components or services. Python supports modules and packages, thereby encouraging program modularity and code reuse .



Here we actually added the module name tkinter and the machine throw errors to over come that we made another module and add tkinter over there.



The best way to do this would be to take each of your sections, and give them each a function of their own. Also, when it's possible, separate user input functions from purely logic to improve readability!

**Chapter – IV**

**METHODOLOGY**

Python has some list methods that you can use to perform frequency occurring task (related to list) with ease. For example, if you want to add element to a list, you can use append() method.

| Method | Description |
| --- | --- |
| [Python List append()](https://www.programiz.com/python-programming/methods/list/append) | Add Single Element to The List |
| [Python List extend()](https://www.programiz.com/python-programming/methods/list/extend) | Add Elements of a List to Another List |
| [Python List insert()](https://www.programiz.com/python-programming/methods/list/insert) | Inserts Element to The List |
| [Python List remove()](https://www.programiz.com/python-programming/methods/list/remove) | Removes Element from the List |
| [Python List index()](https://www.programiz.com/python-programming/methods/list/index) | returns smallest index of element in list |
| [Python List count()](https://www.programiz.com/python-programming/methods/list/count) | returns occurrences of element in a list |
| [Python List pop()](https://www.programiz.com/python-programming/methods/list/pop) | Removes Element at Given Index |
| [Python List reverse()](https://www.programiz.com/python-programming/methods/list/reverse) | Reverses a List |
| [Python List sort()](https://www.programiz.com/python-programming/methods/list/sort) | sorts elements of a list |
| [Python List copy()](https://www.programiz.com/python-programming/methods/list/copy) | Returns Shallow Copy of a List |
| [Python List clear()](https://www.programiz.com/python-programming/methods/list/clear) | Removes all Items from the List |
| [Python any()](https://www.programiz.com/python-programming/methods/built-in/any) | Checks if any Element of an Iterable is True |
| [Python all()](https://www.programiz.com/python-programming/methods/built-in/all) | returns true when all elements in iterable is true |
| [Python ascii()](https://www.programiz.com/python-programming/methods/built-in/ascii) | Returns String Containing Printable Representation |
| [Python bool()](https://www.programiz.com/python-programming/methods/built-in/bool) | Converts a Value to Boolean |
| [Python enumerate()](https://www.programiz.com/python-programming/methods/built-in/enumerate) | Returns an Enumerate Object |
| [Python filter()](https://www.programiz.com/python-programming/methods/built-in/filter) | constructs iterator from elements which are true |
| [Python iter()](https://www.programiz.com/python-programming/methods/built-in/iter) | returns iterator for an object |
| [Python list() Function](https://www.programiz.com/python-programming/methods/built-in/list) | creates list in Python |
| [Python len()](https://www.programiz.com/python-programming/methods/built-in/len) | Returns Length of an Object |
| [Python max()](https://www.programiz.com/python-programming/methods/built-in/max) | returns largest element |
| [Python min()](https://www.programiz.com/python-programming/methods/built-in/min) | returns smallest element |
| [Python map()](https://www.programiz.com/python-programming/methods/built-in/map) | Applies Function and Returns a List |
| [Python reversed()](https://www.programiz.com/python-programming/methods/built-in/reversed) | returns reversed iterator of a sequence |
| [Python slice()](https://www.programiz.com/python-programming/methods/built-in/slice) | creates a slice object specified by range() |
| [Python sorted()](https://www.programiz.com/python-programming/methods/built-in/sorted) | returns sorted list from a given iterable |
| [Python sum()](https://www.programiz.com/python-programming/methods/built-in/sum) | Add items of an Iterable |
| [Python zip()](https://www.programiz.com/python-programming/methods/built-in/zip) | Returns an Iterator of Tuples |

**Chapter – V**

**RESULT AND DISCUSSION**

**Chapter – VI**

**CONCLUSION AND SCOPE OF FURTHER WORK**

**CONCLUSION**

While JPEG techniques are standardized, the potential for further research in the fractal compression area is great. It should be possible to take advantage of the large compression ratios achieved from fractal compression and produce a trade-off of compression ratios for information loss to achieve a lossless result. This could be achieved through a post image decoded from JPEG format comparison of a fractally compressed file and its original 516 data. By then using a traditional compression scheme, encoding of the differences could be implemented in such a way that a lossless representation of the original data can be reproduced. Yet another approach is to let the user select sections of the image to be compressed as lossless.

Both fractal compression and JPEG offer an alternative for meeting future compression needs. Such schemes make use of data segmentation for processing, thus making it possible for the parallelization of the technique for future computer architecture systems.

**FUTURE WORK**

In future we would be analyzing more image compression algorithms in order to obtain a better algorithm, which will result better compression with low data loss, with less redundant data, better image quality.

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