**CHAPTER 1**

**INTRODUCTION**

* 1. **PROJECT DISCRIPTION**

Palmistry has been got changed over the years. Before thousand years ago, during diverse cultures, people have believed and know that an individual's destiny and characters can be previewed in the hands. Some of people still have a hope that this Palmistry is real and works correctly. Through the each lines of each palm we can analyze the present, feature. Here we can use this project as a tool to read palms as we no need of scammers and frauds who fires form the back in the name of palmistry. A palmistry can open your eyes of by seeing someone’s characters that you may be unaware of. Palmists usually check and compare both subjects of right and left hand, looking for differences. A single hands palm lines can define the strength and weakness of person and can preview that how powerful they can become in their future.

Palm reading and analyzing the past, present and future has been increasingly in demand since the last decade. Needless to say that with everything going digital, a lot of platforms are trying to bring technical system for the same. No algorithm or mathematical model still now has been able to predict 100% correct future or past of a person. So every researcher is trying to add extra attributes, devising new methods and possibilities to improve this ratio. The previously stated works and other simple studies have obviously demonstrated the need of purpose and create a good project for the analysis. Every new research in this field bring about a variety of possibilities to be manipulated, used or mixed with different parameters to get a new and better result.

**1.3 OBJECTIVES**

The project “Palmistry” is to read and analyze the palms and predict results of his characters and etc., accordingly.

1. Implemented GUI for the communication between system and user.
2. Provides proper monitoring facility.
3. Edge detection using grayscale and tried to smoothen the lines of palm.
4. Data testing and training is made for proper prediction.
5. The project is still on the process for more complex activities, trying to use gridding, annotation and etc.
6. User can upload their palm pic and predict their result and save it.

**CHAPTER 2**

**LITERATURE SURVEY**

**2.1 EXISTING SYSTEM AND PROPOSED SYSTEM:**

**2.1.1 Existing System**

This project is an unique according to me. Before this so many people tried to implement on this palmistry. Some of them did and also still trying to add more features to it. I also tried it on separate concept. Here before this, they were some predefined images, the user should choose similar image which will matches their palm and see the results. This was a failure project because every palm is unique. There may be chance of getting similar palm but there will be changes from one character of that person to another. That will be checked if we know everything of palmistry.

And also there are projects which are good at predicting. But there is something called work before prediction. They should mark the lines into rectangle format and they should try to predict. This is so heavy, hence I am trying to implement a project which can predict perfectly without any external work after clicking predict button. And we have so many projects on Astrology applications which will give the result of a person by taking their date of birth and timing of birth. Here in future I will try to implement both Astrology and Palmistry in single project, which will help to predict and compare the results and come into final decision.

**Disadvantages:**

1. No proper image selection process used.
2. There was a common process to see result.
3. Result was not given by software, user need to check every image and need to analyse the similar image for his hand and need to check the result.
4. And also that result will not be proper as user hands.
5. There is no saving the result of person.

**2.1.2 Proposed System**

Here I tried to develop an project which can predict perfect result separately. Therefore I implemented on separate function/button for prediction. As we know, before there was a condition that there was no other option rather than going to the Astrologer, Palm readers. We don’t know exactly whether they are saying correct or not, there they might make a scam to earn money. Hence to come out form that scam, I tried to implement a project on palmistry. And also I have some future enhancement which I wanted to implement astrology to this palmistry.

**Advantages:**

1. There is proper image selection process used. Which user can use their own image for predicting result.
2. There was a common process to see result. Which each person will upload his hand image and check the result through buttons.
3. Result is given by software, user need to just upload his image and click the button to check his characters result through button.
4. The result will be exactly perfect to the character of person.
5. There is a button to save the result of person which he can take it as hardcopy as well as softcopy.

**Objectives:**

1. Implemented GUI for the communication between system and user.
2. Provides proper monitoring facility.
3. Edge detection using grayscale and tried to smoothen the lines of palm.
4. Data testing and training is made for proper prediction.
5. The project is still on the process for more complex activities, trying to use gridding, annotation and etc.
6. User can upload their palm pic and predict their result and save it.

**2.2 FEASIBILITY OF PROJECT:**

Here feasibility of the project consists of steps, before going into that steps let us see the summery of feasibility here. Here I downloaded the existing software from github which is a website to learn on specific project. I was just searching on my topic and I found it on github. I tried to execute it properly but I couldn’t do it properly so I started doing some changes on that project which to do it so easy to access by user. I just altered the GUI and changes the characters by training the models according to my knowledge with the help of AI website which is a ChatGPT. I need to greet a thanks for this website which helped me a lot to implement a good and easy project on the concept of Palmistry. As I told before there are some steps for this feasibility and they are:

**2.2.1 Economical Feasibility:**

This is an advantage of my project which I had not even spend a single rupee to implement this project. All the tools are free to access and they are, PyCharm community edition application to build a code, libraries like Tkinter, Keras, Tensorflow, numpy, pandas, OpenCV, matplotlib and so on, which are economical free to import though terminal using pip predefined keyword. And also I had not spend money for anyones help. I am so happy and I feel great that I implemented by alone with the help of github and chatgpt. And also I had not spend money on searching papers. I got some papers for free, and also there were paper which are needed to buy. It present I had not purchased them but I will buy them for my future enhancement.

Only for the plagiarism I need to spend the money and also for paper publish I need to spend money. Hence Feasibility on Economy is advantages and made no harm to me.

**2.2.2 Technical Feasibility:**

There was process which is hard to find a proper idea to implement this project a first. I was technical less and was thinking what to do. And then later I got an idea through github and I started implementing on it. I altered the GUI into my knowledge and goes on well with data training and result prediction. I used so many libraries they are:

**2.2.3 Social Feasibility:**

This project brings good changes to the society which helps to reduce scams as I told before. This is a good concept to implement and bring to society. As my knowledge people will accept this project. Because all has their own experience and may they had got scamed by people in the name of palmistry. By this project they can predict their needs without paying a single amount and can download the results too.

**2.3 TOOLS AND TECHNOLOGIES USED:**

**Python:**

Project is developed by using python language which is an easiest and fast programming language. This language is best language because there will be less lines of code compare to other languages. In python there are many separate concepts to implement a specific project here I used a deep learning and machine learning to develop a palmistry project using python. Python I one of the open source language which we can download and use for free. At present python 3.12 version is running successfully and I used the same version for developing my project.

**PyCharm 2024.1.1:**

This is the tool which I used to implement my project. This is an open source application can be download on google. Provided by jetbrains. Here there are two types of pycharm applications, one is pycharm community version which is free for learning purpose. And another is professional version which is for developers in company.

**Libraries:**

Here I used so many libraries for developing my project called palmistry they are:

**Tkinter:** Which is used to create a GUI for interaction between user and system.

**OpenCV:** This is library used to read an images and videos by converting it into pixels or any other formats.

**Tensorflow:** This is also a library which is used to read the images with the help of another library called keras for image processing technique.

**NumPy:** Numpy is used to read the number which we converted from image to pixel format and also for reading values.

**Matplotlib:** This library is used to draw a map of a graph for an image or by using values.

**2.4 HARDWARE AND SOFTWARE REQUIREMENTS:**

**2.4.1 Hardware Requirements:**

* Processor : intel CORE i3
* RAM : 8GB RAM
* HDD : 40GB or more
* Computer Memory : 500Mb or more
* Graphics hardware : Not required
* Network : No internet connection

**2.4.2 Software Requirements:**

* Operating System : Windows 7 or more
* Designing Format : GUI
* Programming Languages : Python
* Application : PyCharm Community Edition 2024.1.1

**CHAPTER 3**

**SOFTWARE REQUIRMENTS SPECIFICATION**

A Applications Requirements Details (SRS) is a comprehensive record detailing all requirements, both functional and non-functional, for a specific software product.. The Software Release Schedule (SRS) serves as the primary reference for the software development team and all other stakeholders involved in building the software product.

A robust SRS is crucial for software projects as it ensures a The goal is to foster a share understanding among all stakeholders. about the project's purpose and scope.

This documentation ensures clear understanding of the software's function, behavior, and intended users, preventing misalignment between development teams.

The SRS facilitates early project understanding among teams, allowing for clarification and the discussion may not be entirely accurate. occur during the development phase.

Most of the teams likely to deliver software products that align with the original scope and functionality as outlined in the SRS, meeting user, customer, and stakeholder expectations.

**3.2 FUNCTIONAL REQUIREMENTS**

**Functional requirements**

* User can upload his hand pic and see result.
* User can see the result separately by separate button.
* User have an option to download their result.
* And in future I will implement the admin module to manage the users accessibility to detect fraud activities.

**3.3 NON-FUNCTIONAL REQUIREMENTS**

Requirements that which are not functional are different they are not linked to functional element of the software. Here in non-functional, this focuses on the out parts of the project which is determined that how the system operate, instead of focusing on internal requirements for coding. Needs that are not functional encompass various aspects such as usability, dependability, safety, preservation, expense, adaptability, setup, efficiency, and any applicable laws or regulations, among others.

Non-functional requirements, or NFRs, are frequently considered the “-itys.” Although the details will differ for each product, knowing these NFR categories in advance will serve as a helpful checklist to ensure you don't overlook any important needs.

While not all of them are on this list, it provides a general/common understanding of the topic.

**NFR “-itys”**

**Security:** — This says that weather our product transfer or keep private information information Does your division of information technology mandate specific standards to be followed?

**Capacity:** — The systems current and future requirements for storage and how it is and will increase in size by collecting the data for data storage are crucial factors to consider.

**Compatibility:** — What are the minimum hardware requirements? The question asks for the list of operating systems as well as their respective variations that has to be backed up.

**Reliability:** — Reliability is nothing but a work of project on real time. It say how this project is getting usable to people in real life.

**Availability:** — This concept explains that how much and where else we can use this project, it says that is it available when we have necessary or is it usable to people at the time when they need.

**Maintainability and Manageability:** — The time it takes to repair parts and the ease of system management are crucial factors to consider.

**Scalability:** — Here we will check the performance and how long will it stay or how long will it work without causing any trouble.

**Usability:**— It tells how much How simple is it to use this product .It characterises the encounter of the product's user.

**CHAPTER 4**

**SYSTEM DESIGN**

**4.1 SYSTEM PERSPECTIVE**

System architecture tells the procedure for identifying the architectures, interfaces as well as data flow for a framework that meets specific prerequisites. Designing a system is a process that ensures the organization's needs are met via logical and effective systems.

Once your company or organisation has identified its demands, you can start incorporating those needs into a system design that meets the needs of your clients physically. The layout of It will be up to you whether or not you prefer commercial solutions, custom development, or a mix of both.

System architecture necessitates a methodical approach to the construction and technical of systems. A successful system design involves considering all aspects of an infrastructure, including hardware, software, data storage, and data management.

1. Browser
2. Male and female check button.
3. Sample
4. Nature prediction
5. Color prediction
6. Flexibility prediction
7. Save

**4.2 SYSTEM MODULE:**

My project palmistry has only one module that can be used by any person, here he/she can run the project and predict their palmistry by uploading the images of their hand. And also they then download their result if they want.

Here we have separate buttons like,

1. **Sample:**

Sample button is used as to give blue print of palm image. Here we can see the names of palm lines and mounts. This is only for reference.

1. **Nature Type:**

This button is used to predict the main character of person by checking the nature of his palm. By detecting the shape of palm and size of fingers.

1. **Color Prediction:**

This button is used to predict the character of person by checking the palm’s colour. This will tell the person’s anger and calmness.

1. **Flexibility:**

This button is used to predict the person is adjustable/flexible or not by checking his hands angle.

1. **Save:**

This save button is used to download the result in pdf format that person can take a printout if he need it. And then finally I am trying to implement more buttons to predict marriage, luck and other results also in my project. And also I have edge detected to predict more lines which I am working on it

**CHAPTER 5**

**DETAILED DESIGN**

**5.1 BLOCK DIAGRAM**

User

Images

Button N

Button 1

**Figure 1: Block diagram**

This is the block diagram which will tell that what are the modules we contain in this project and how the user will access the project.

**5.2 USE CASE DIAGRAM**

**5.2.1 User use case:**

**GUI**

C:\Documents and Settings\Administrator\Desktop\uml-use-case-diagrams.png



**User**

**Figure 2: User to GUI interaction**

Here we can see how the user can interact with GUI by created buttons. Here in GUI there are so many buttons which works on their particular topic. Each buttons tells the different result which you can see in next figure 3.

**5.2.2 GUI to Buttons**

C:\Documents and Settings\Administrator\Desktop\uml-use-case-diagrams.png

**GUI**



**Figure 3: GUI Performance/ interaction with System**

Here in this diagram we can see how the GUI is built with the help of buttons and each buttons predicts different result which we coded inside it. Where Brower helps to select the image of hand. And so on which give results.

**5.2.3 Buttons and Messages**

Selection of hand image

Check box for identification

Blueprint of palm to read

Flexibility prediction button

Nature prediction button

Colour prediction button

**Figure 4: Buttons which gives specific result**

Here each buttons will give the specific result as I told before. Here are the buttons names and the short explanations of result which we will get on our frame>

**5.3 SEQUENCE DIAGRAM:**

GUI

User

**Browe Image**

**Select the Gender**

**Predict result through buttons**

**Save and download your result**

View Profile

**Figure 5: Sequence diagram**

This is a sequence diagram which tells how to interact with system by user. At first we need to select the image through browse button and then we need to select the gender through check box and then we need to predict with the help of all buttons on specific topic as mentioned in above figure.

**5.4 E-R DIAGRAM:**

User

Browse

Gender

Sample

Flexibility

Select Image

Image

Nature

Image

Colour

Image

Save

Image

**Figure 6: Diagram which shows how the flow of task is done between user and monitor GUI**

**CHAPTER 6**

**IMPLEMENTATION**

**6.1 PROJECT OVERVIEW:**

During this project it was so hard to understand the algorithms and methods. Here at before they used so many compile time methods, which is so hard to the use who need to see their result. Hence I rewrite those methods and trained the images for some prediction and used basic neural network algorithm to analyze the images and predicted the result with the help of user usable GUI.

**6.2 IMPLEMENTATION PROCESS:**

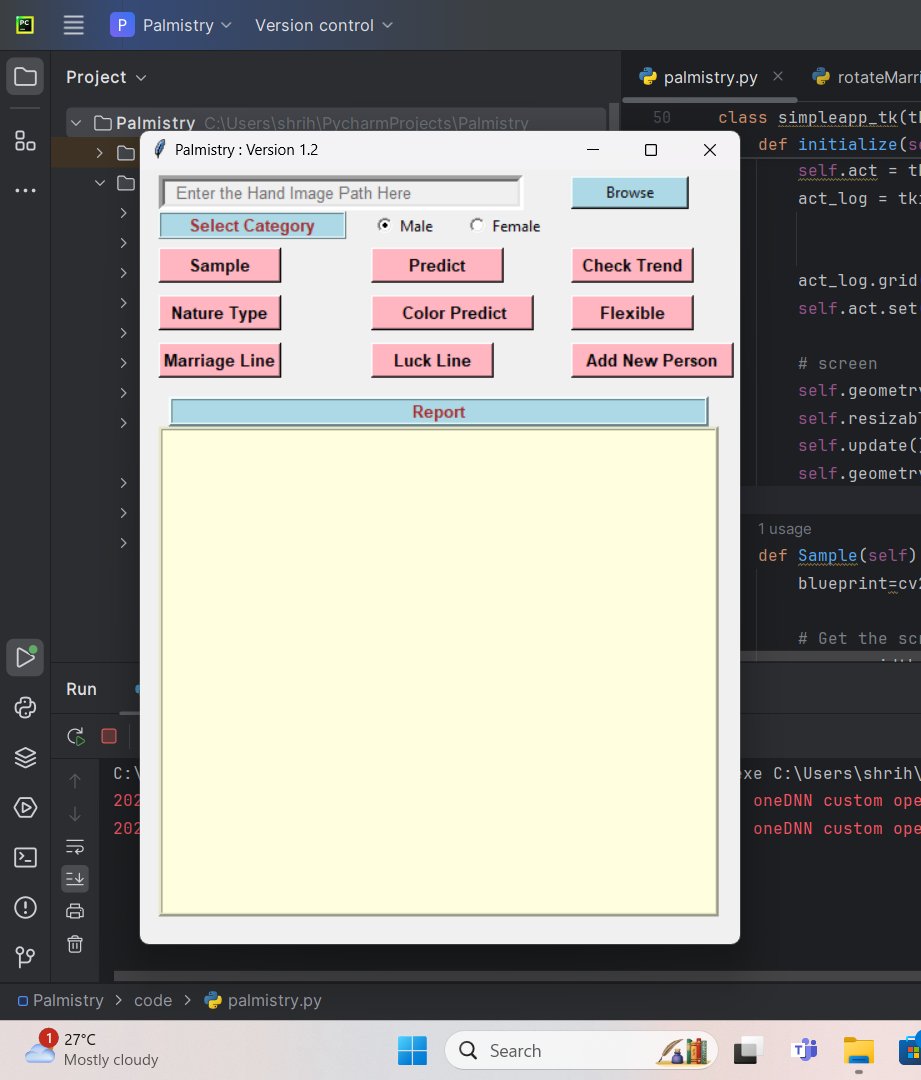
The process of development a software on one project is a big task that will be implement

with the help of corporate companies with huge fund and huge number of technicians. Depending on the work of company, requesting for the development of software is analysed and corporate company need to analyse this requirements. And by the analyses of requirements company can deside weather they can build the requested software through project or not. Before getting into project, they need to list the requirements and need to sketch the blueprint of the projects called as required processing models. This may contain tools requirements, finance requirements, time requirements, advantages and disadvantages, and also profit and loss. After listing everything, they can start implementing the project through processing models.

Here I implemented a project which is already exist and altered it with some easy and good methods which can be advantages to the people. This project is simple and not so complex to understand and use.

* 1. **SCREENSHOT**

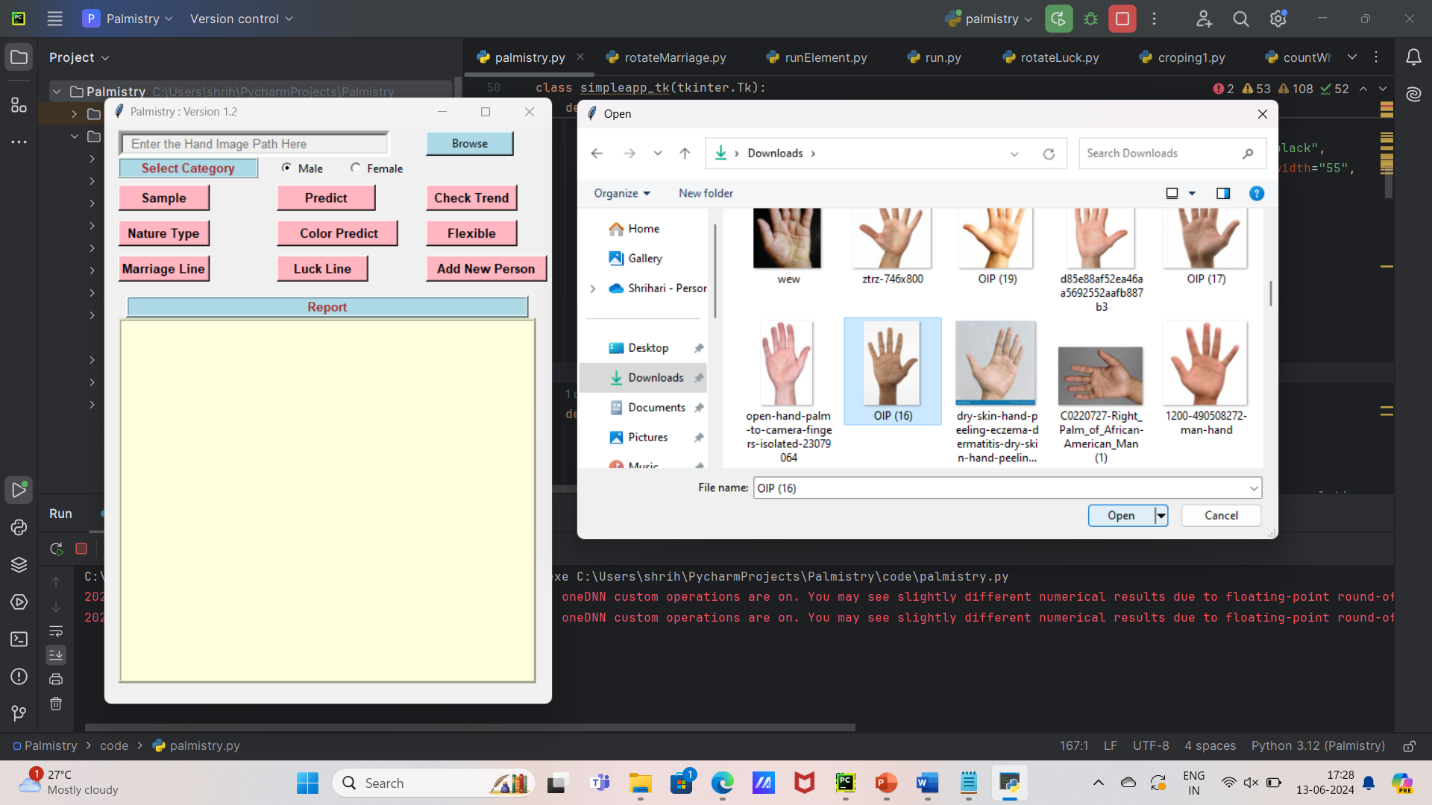
**SCREENSHOT 1:**

****

**Figure 1 – GUI of Palmistry**

This GUI as it names says it is an user interface to the project. Here it consists buttons for selecting the image of hand, and check button for choosing gender, and consists sample palm blueprint, and prediction buttons like nature type, color predict, flexibility, and at final we have saving button to download and share the information of person.

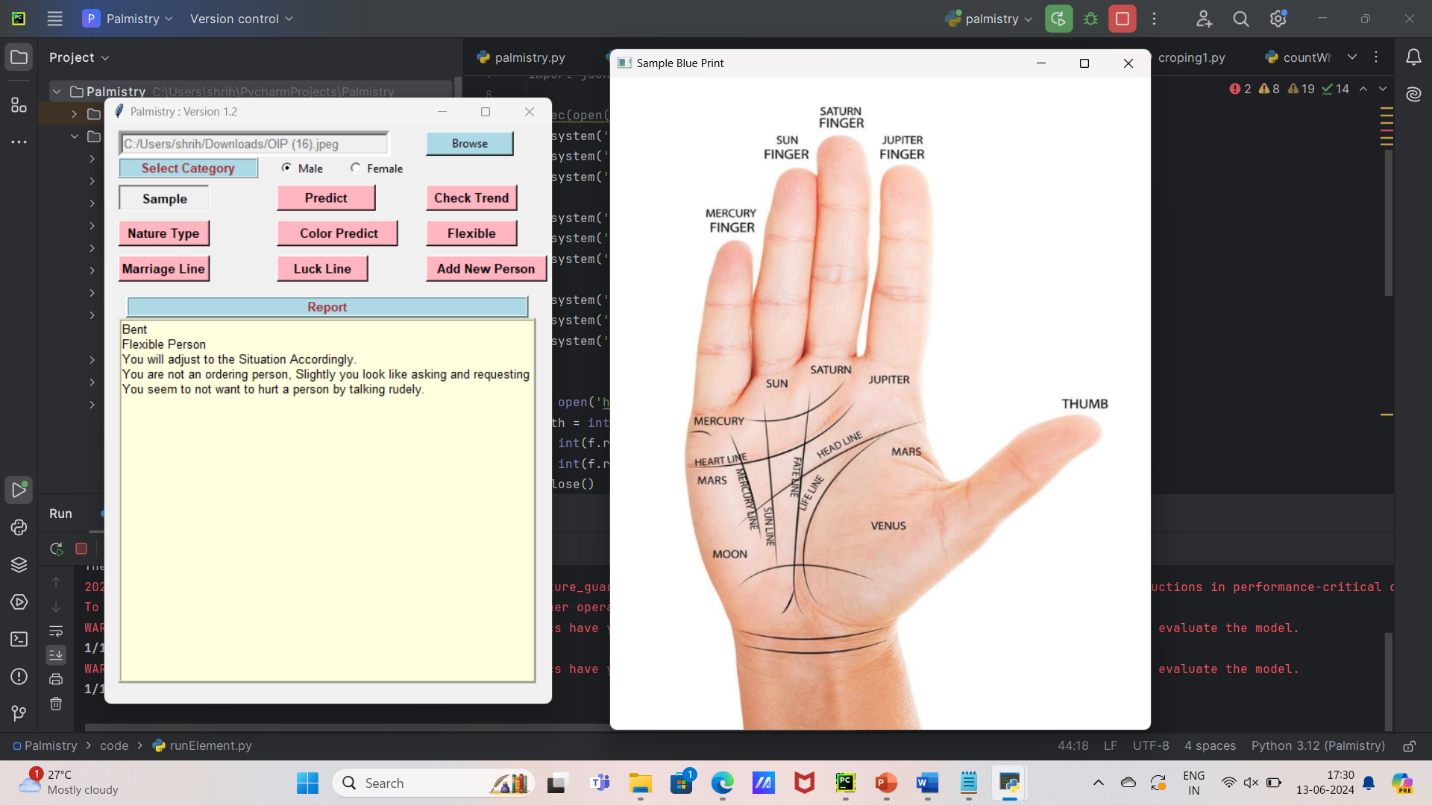
**SCREENSHOT 2:**

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**Figure 2 – Select the Image from browse button**

Here we are selecting an image as I mentioned before. At first we need copy or share the palm images to the system to browse. And then after copying we need to click on browse button and we need to select the image through the file Open which we can see the path in the box.

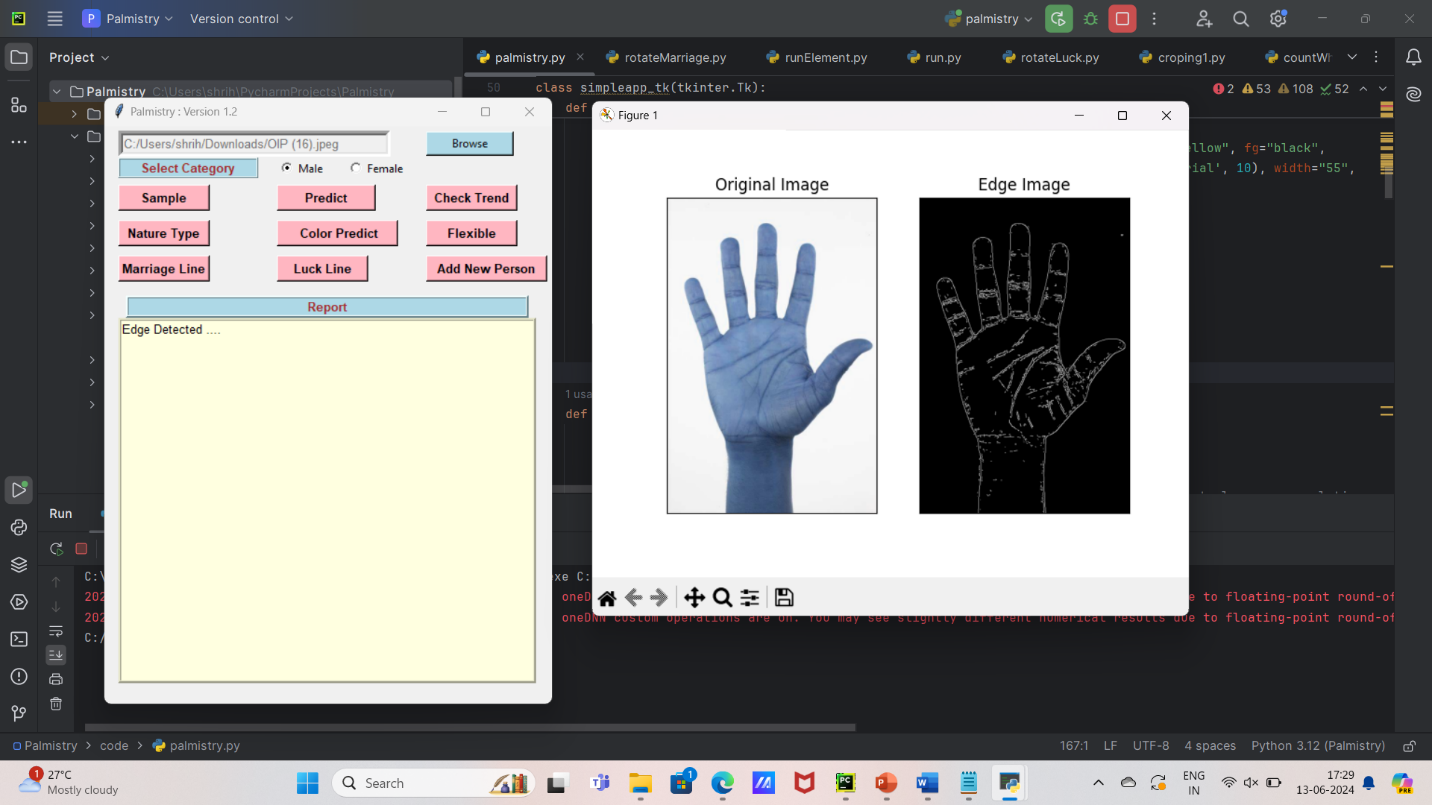
**SCREENSHOT 3:**

****

**Figure 3 – Simple blueprint of Palmistry**

This is the Sample or blueprint to understand the workings of palmistry. Here we can see the names of each lines and names of each mounts. Here we consists all lines but in an real-time humans may don’t have every lines which we are seeing here. And also there may be changes in the position of lines into the other mounts. This will say the characters, features, behaviors of the person.

**SCREENSHOT 4:**

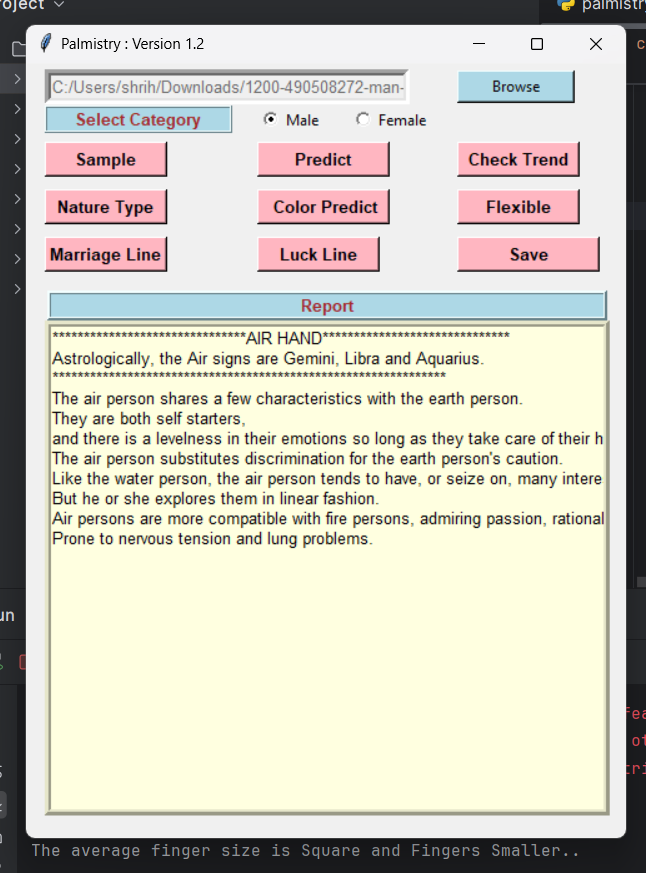
****

**Figure 4 – Edge Detection Method Applied**

Canny Edge Detection is used to see every lines of palm and also in future this will helps to detect the luck factor and marriage age and number of children And also supporter or guru of life can be seen.

This will help to store the gray and white lines in different list, which will make me easy to write code to detect the above mentioned characters.

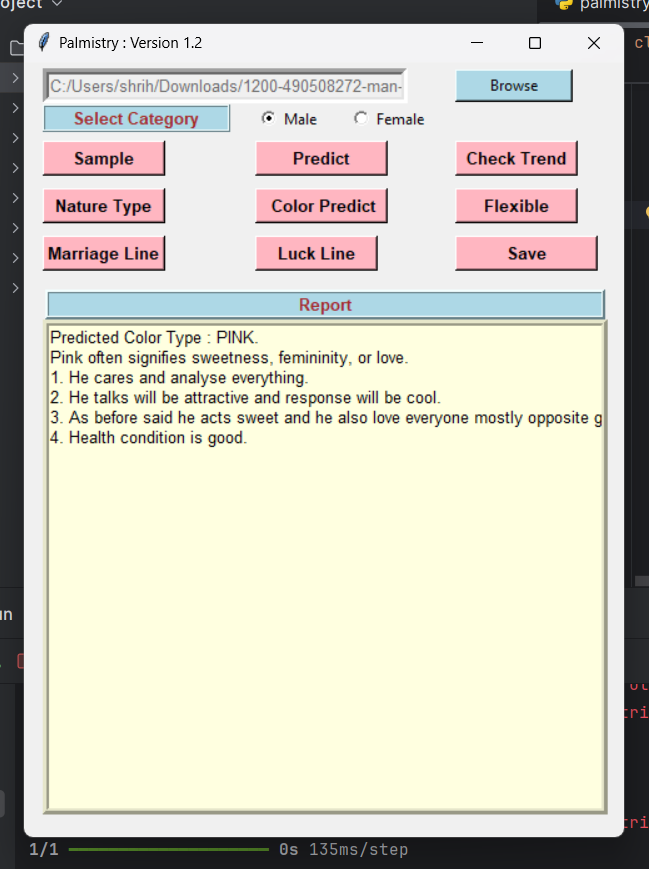
**SCREENSHOT 5:**

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**Figure 5 – Nature Type prediction**

This is the prediction of nature type of a person which will tell the behavior and some characteristics of person. Each nature type like air, water, earth/land and fire which has some specific properties are applied to the person with some categories of rashi

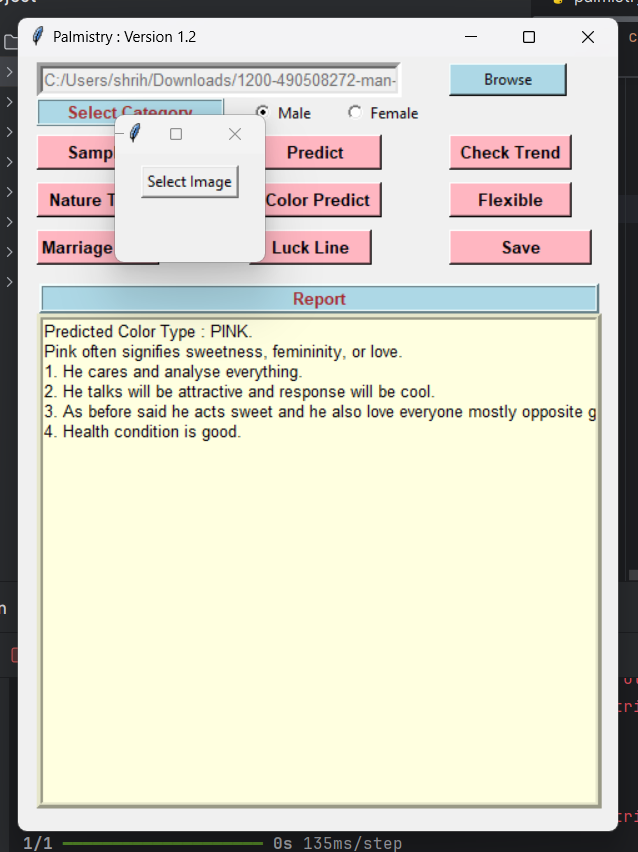
**SCREENSHOT 6:**

****

**Figure 6 – Colour Prediction of Palm**

Here we will predict the color using the palm hand. This is categorized into three different color they are, pink, red, white which says their some behavior and responsiveness towards other people.

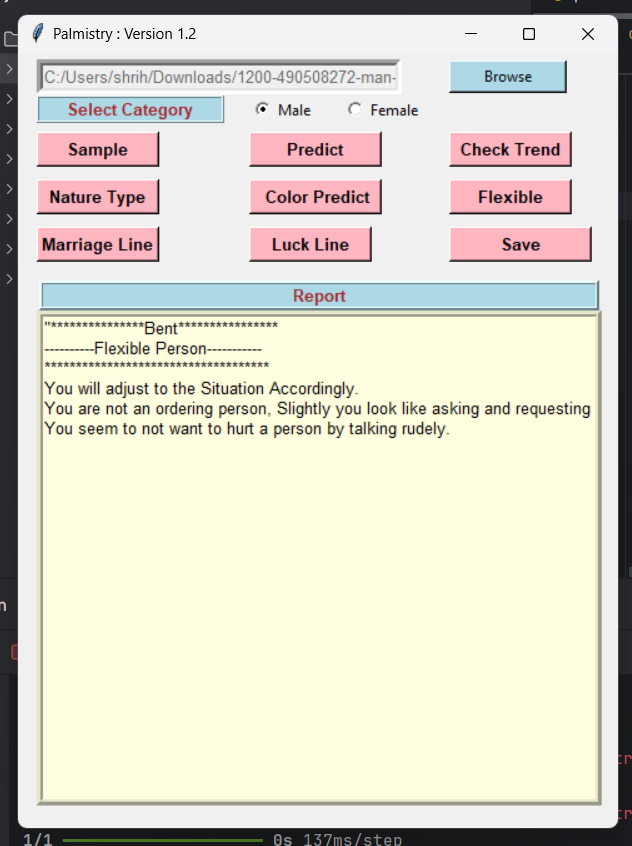
**SCREENSHOT 7:**

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**Figure 7 – Selecting Image for Flexibility prediction**

This is the flexibility detection of a person by checking the curve able or urcurve able palm which is palm can bend or not will be checked by selecting the image. Later it will give the two different result for two different images.

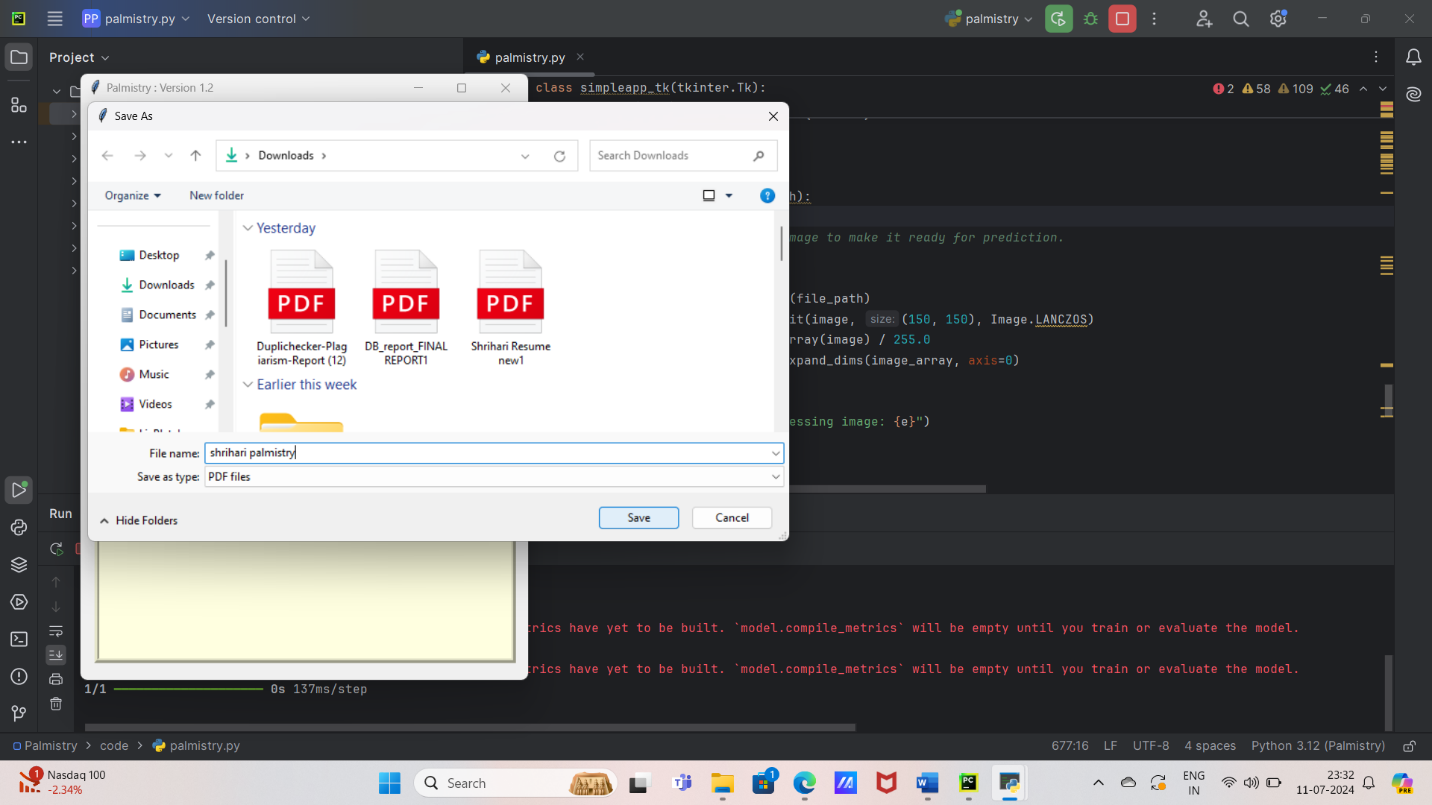
**SCREENSHOT 8:**

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**Figure 8 – Flexibility Prediction**

This is the output of above figure 7 image which will give the two different result they are bend – flexible and straight – unflexible.

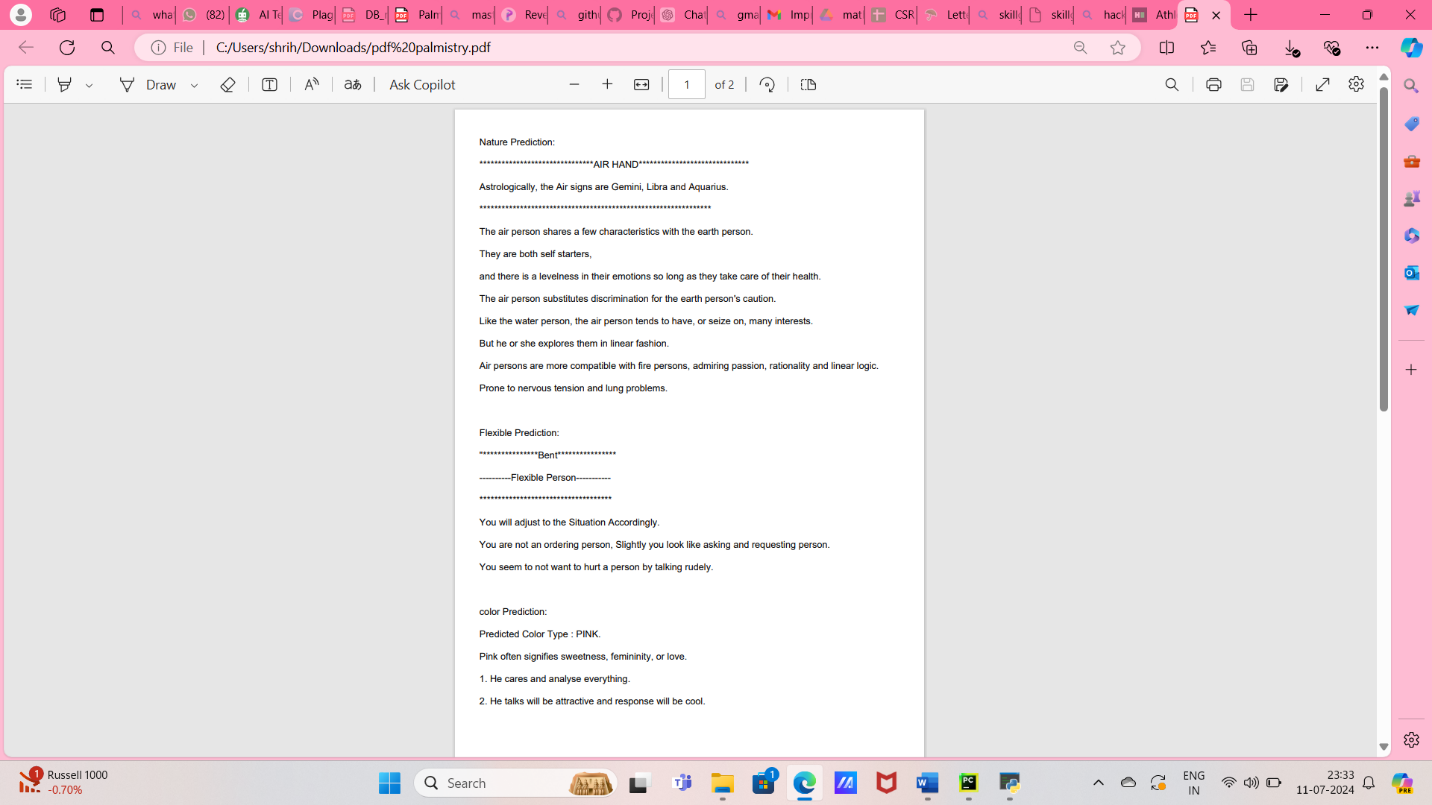
**SCREENSHOT 9:**

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**Figure 9 – Saving the pdf**

Here we are saving the all the result into pdf format which helps to take a copy as both softcopy and hardcopy. Here we need to just click the save button after predicting every result and then we need to save it as we want in your name. Which will directly saves in download file.

**SCREENSHOT 10:**

****

**Figure 10 – Saved pdf**

Here we are saving the all the result into pdf format which helps to take a copy as both softcopy and hardcopy. Here we need to just click the save button after predicting every result and then we need to save it as we want in your name. Which will directly saves in download file. This is the saved pdf which is showed in figure 10.

**CHAPTER 7**

**SOFTWARE TESTING**

**7.1 INTRODUCTION ABOUT TESTING:**

Testing evaluates a method to ascertain if It satisfies the standards stated, identifying gaps, mistakes or omitted requirements that conflict with the real needs.

**Acceptance Testing**:

The Quality Assurance Team conducts crucial testing to ensure The application complies with the desired requirements and meets the desired level of satisfaction the needs of the customer. Acceptance testing

is nothing but a checking the project by the client who was requested the software. He will check the every model of software which is working properly or not and then he will accept the project or else he will ask for some changes what he needed.

Acceptance tests detect not just typographical errors, but also aesthetic errors, and interface flaws, in addition to bugs causing system failures or significant application mistakes. The testing team may determine how an application will function in production by running acceptance tests on it. The system's acceptance is subject to both legal and contractual requirements.

**Alpha Testing:**

This is the test's initial phase, and this is also called as White Box Testing, Here we will test through one by one by the developer itself. Will be performed Alpha testing is the term used to describe the combination of unit, integration, and system testing. The application will undergo testing of the following aspects during this phase:

* **Unit Testing:** We did testing for separate models one by one and actually this project will run as separate module but we have a link to the same image which we browsed at first.
* **Integrate Testing:** Here after we create separate units and tested it we need to create a link between browser and those units and this is called Integrated Testing.
* **System Testing:** System testing is not applicable to my project because Integrated Testing is same as System Testing in my project.

**Usability Testing:**

A black-box method is usability testing, this technique or this testing is done by the frontend testers who does not have idea of coding. Or have idea but they won’t check backend part. Here they will only check weather error is getting or not or weather integrated project is working properly or not. The tool is utilized to detect and rectify software errors and enhancements by observing users' usage and operation.

Nielsen defines usability as a product's efficiency, Learnability, memory retention, safety and error management, and satisfaction, with a good system exhibiting these factors for usability, according to his perspective.

**7.2 MY TEST CASE TABLE:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Expected Result** | **Out came Result** | **Remark** |
| Brower Button. | Need to Visit the files and need to browse the image with showing path on GUI | Visited the files and browse the image with showing path on GUI browser frame | Pass |
| Male/Female Check Box | Check Box to Identify hand | Check Box worked | Pass |
| Flexibility Prediction Button | Predict through trained model by selecting image through same browser button. | Predicted through trained model by selecting image through another button inside flexibility prediction button | Pass |
| Nature Prediction Button | Predict using trained model with same image | Predicted using trained model with same image | pass |
| Color Prediction Button | Predict using trained model with same image | Predicted using trained model with same image | Pass |
| Sample Blue Print Button | Just show blue sketch of Palm lines and their names with mounts | Yes it worked and displayed sample image | Pass |
| Save Button | Save the predicted result and download it in pdf format, which helps to take printout if needed | Yes this also worked as expected and can download the result for further use | Pass |

**CHAPTER 8**

**CONCLUSION**

The purpose of the project in this Postgraduation is to develop our performance skill with coding knowledge as well as understanding the codes, debugging the code and also creation of code with new ideas to implement new inventions. The inversions should be usefull to society that which we can enhance the project and get profit.

Here my project is aimed to build a web application. But because of short time and no much idea about building the website. I just created a GUI Project which manages to interact with user. Here there is no data management, but the result can be saved in my files which we can use it later as hard copy.

According to my knowledge I built a project called Palmistry which can be very usefull in upcoming dates by preventing the scams and fraudulent activities which are happening now a days with this concept.

**CHAPTER 9**

**FUTURE ENHANCEMENT**

I would like to implement more features for my project and they are as follows:

1. Willing to detect marriage age.
2. Willing to detect luck factors during ages.
3. And to detect karmas of person,
4. Detect for job specifications like business or government or etc,.
5. And also I will try to implement mounts and their characters.
6. And also some symbols which are good and bads.
7. I would like to create website on this project and planning to give access to admin and see the users activities.
8. And also I would like to create a login page with format to every user by uploading their pass-photo, Name, Email, Password, DOB, and more personal information to check his activities on that website and give access for user to take printout of their results.

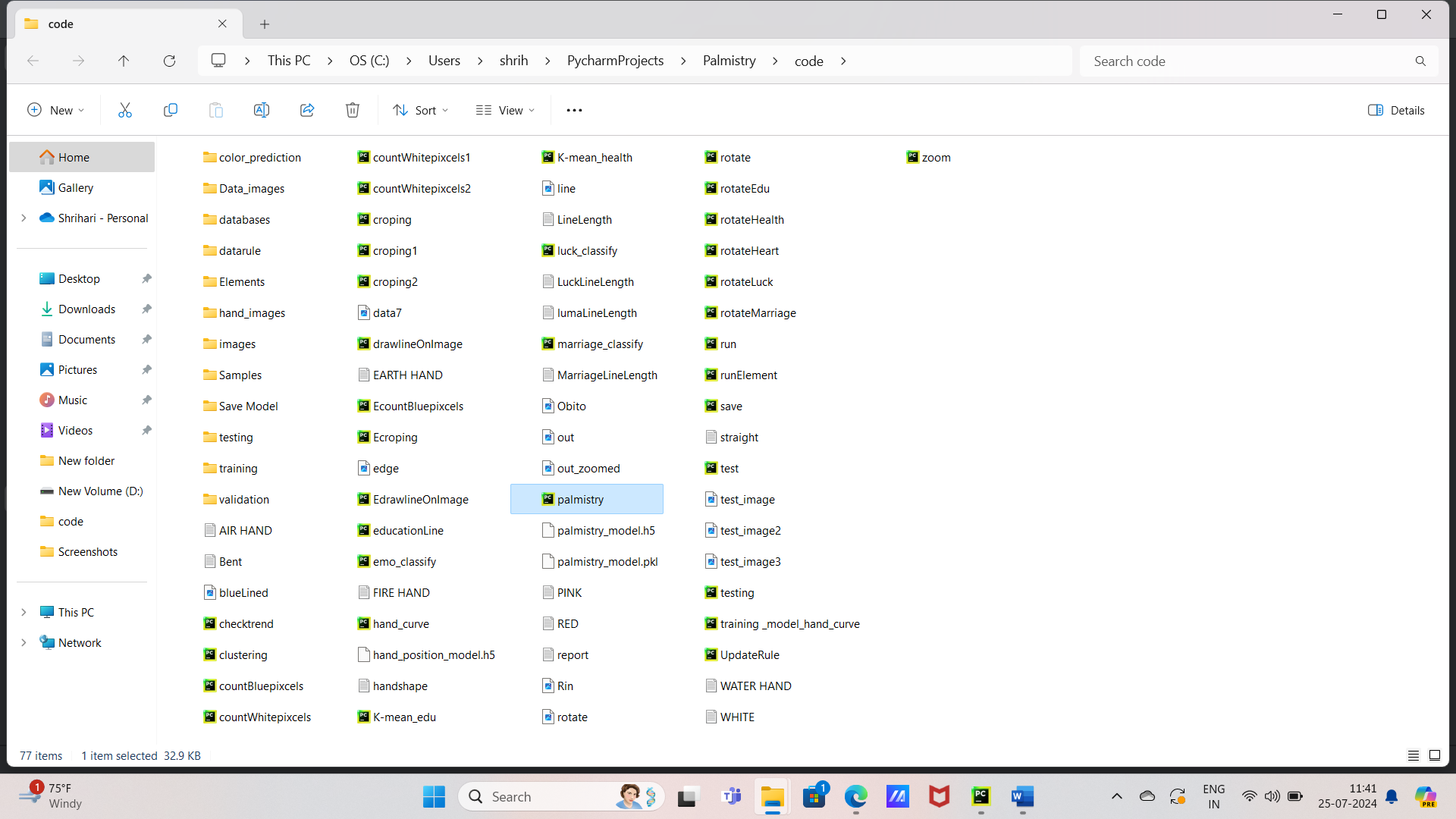
**APPENDIX A:**

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22. <https://scholar.nycu.edu.tw/en/publications/a-deep-learning-approach-for-efficient-palm-reading>

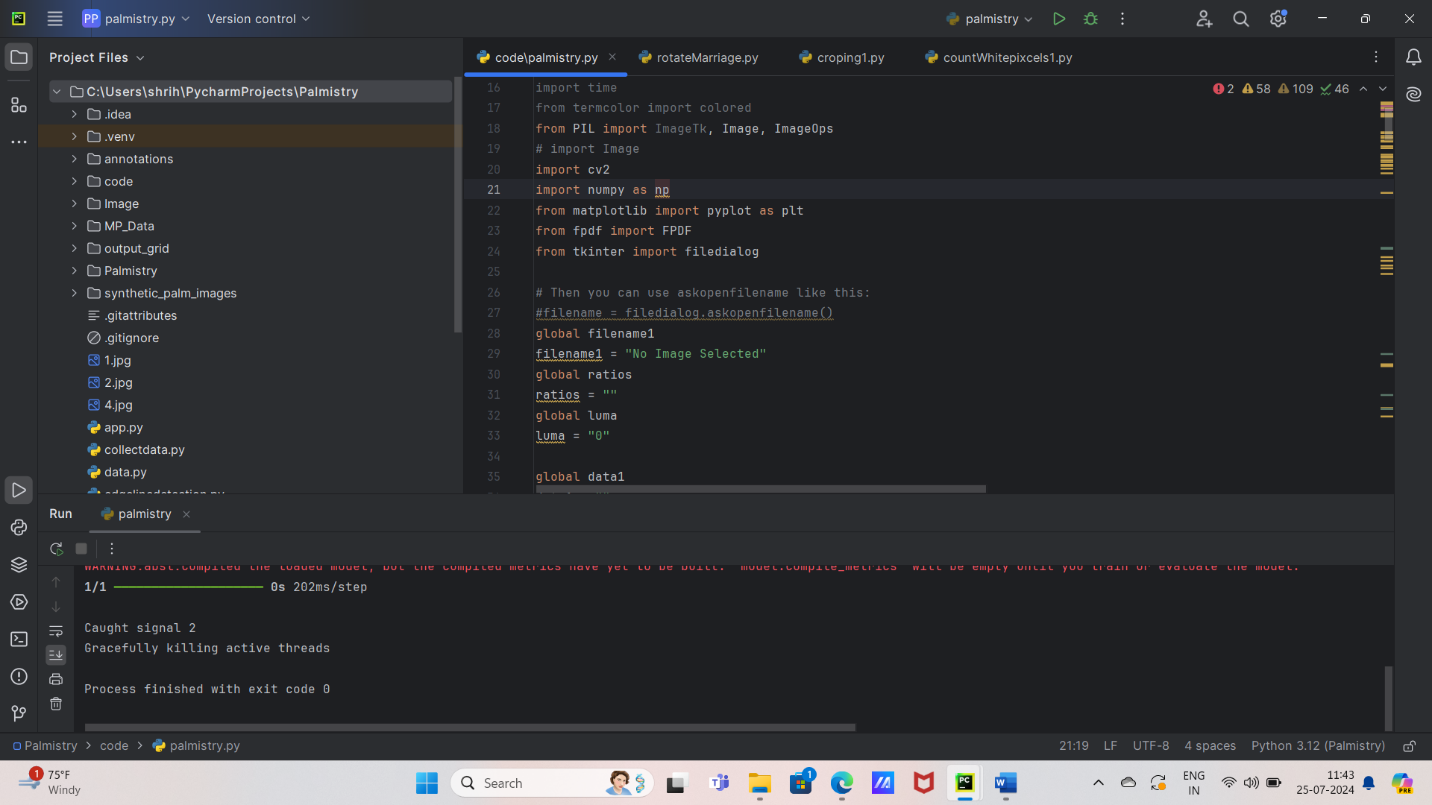
**APPENDIX B:**

**USER MANUAL**

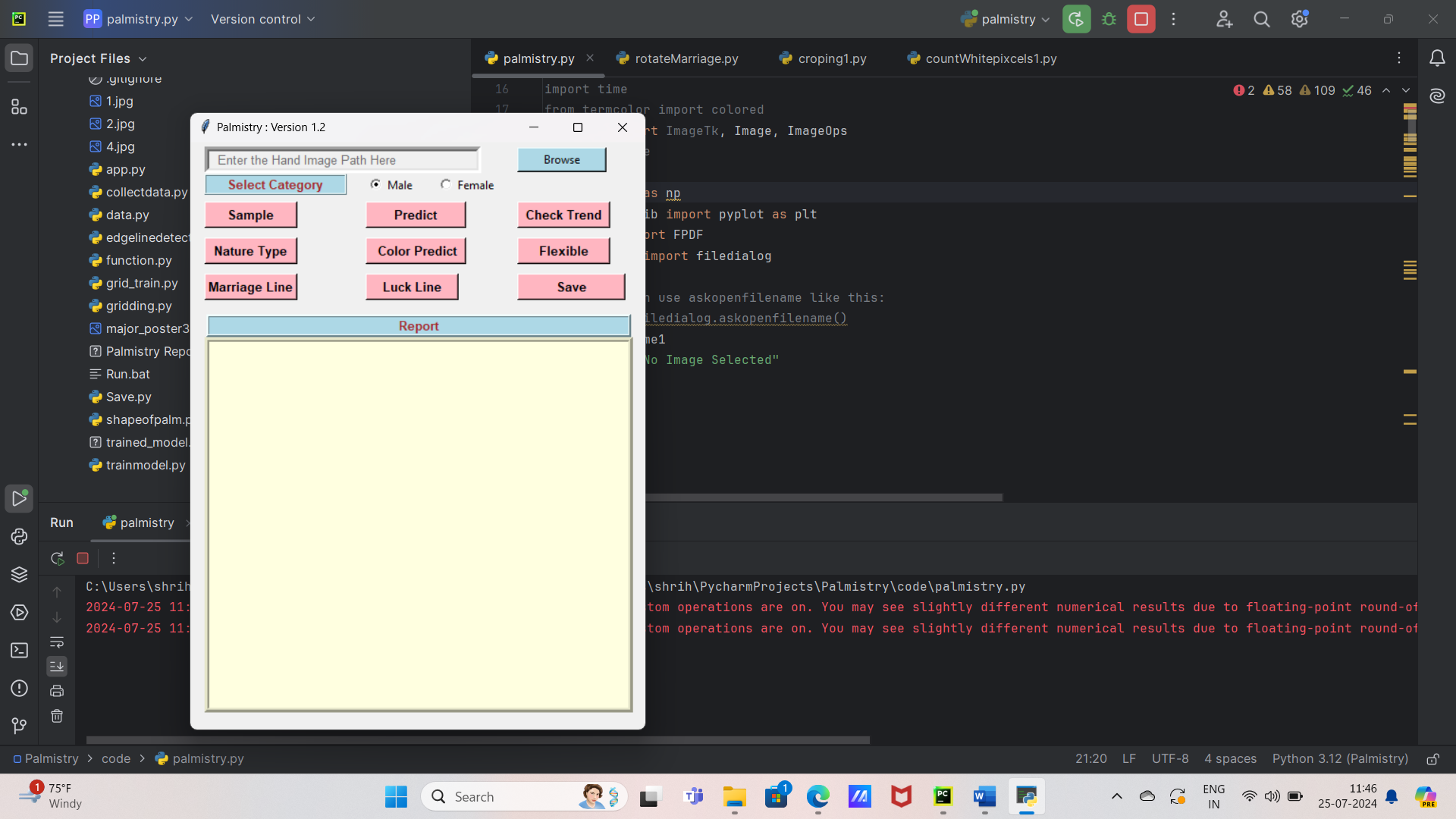


**Fig 1: Path of project**

Here in the file of whole project we consist palmistry as a main program code. And also we have so many trained models like h5 and we have images which we change automatically as main image for prediction and we have so many notepad file which have result.

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**Fig 2: Run Palmistry code to get GUI**



**Fig 3: Use GUI buttons for predicting by uploading hand image1**