TITLE: RECOGNITION OF DISEASE USING SKIN CAPTURE

PROBLEM STATEMENT:

Some skin signs such as change in skin color, moisture and temperature can signal certain diseases. Now day's skin related diseases become more common problem in human life. Most of these diseases are dangerous and harmful, particularly if not treated at an initial stage. People do not treat skin diseases seriously. Also they may not be aware of severe problem of skin diseases. Diseases have tendency to pass from one person to another person easily. Hence it is very important to control it at earlier stage to prevent it from spreading in people. The damage done to the skin due to various diseases also could damage the self-confidence, mental confidence as well as wellbeing of people. Therefore the skin diseases are become a huge problem among people. It has become an important thing to treat these skin diseases properly at the earlier stages itself to prevent serious damage to skin.

Main purpose of the project:

- The diagnosis of the disease requires a high level of expertise and accuracy for doctor, so computer aided disease diagnosis model is proposed to provide more objective and reliable solution.
- Accurate recognition of the disease is extremely challenging due to the following reasons: low contrast between lesions and skin, visual similarity between Disease and non-Disease area, etc.
- When the disease analysis process is performed manually which can lead to human errors and takes 1-2 days for providing the biopsy results. Also the physician find it difficult to identify the type of disease and the stage of disease at the analysis stage
- Disease can be cured at the initial stage without any further delay.
- As we know image processing based disease analysis is more demandful, as this could provide promising result in less time.
- Disease analysis through skin capture kit is an user friendly which can be understandable and trustable by the user(patient).

REQUIREMENT LIST:

- Power supply
- Camera
- LCD Display
- Raspberry pi
- GSR Sensor

SOFTWARE REQUIREMENT:

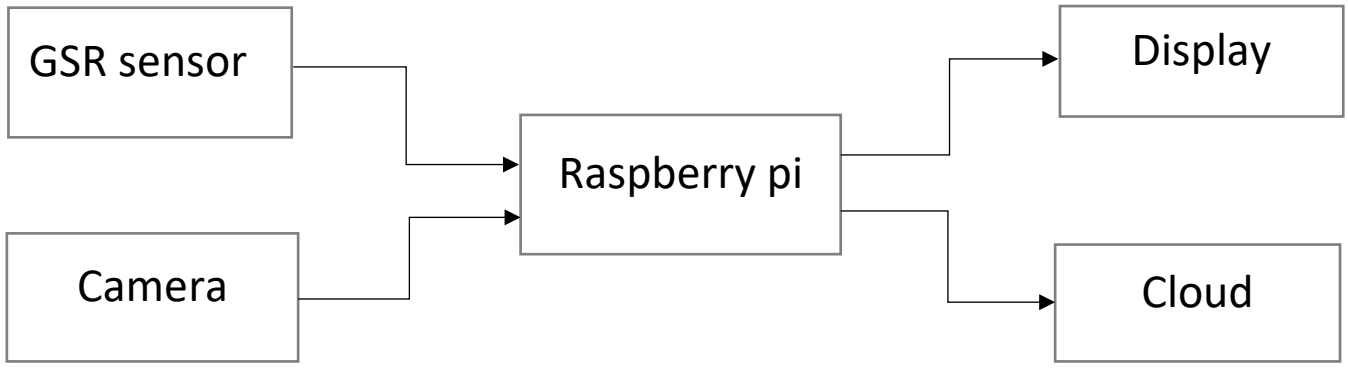
- IDLE Python
- Artificial Intelligence

REQUIREMENT DESCRIPTION:

- Camera: A camera is an optical instrument that captures the visual image. It is used to capture the effected part of the skin
- Display: It includes the monitor or display screen that displays the processed image
- GSR Sensor: Galvanic Skin Response, is a method of measuring of electrical conductance of the skin(to measure skin resistance conductance).GSR sensor detects sweating. Strong emotion can cause a stimulus to your sympathetic nervous system, resulting in more sweat being secreted by the sweat glands. The electric conductance varies in proportion to moisture level of the skin. GSR value varies based on mental or physiological arousal as per sweating produced by our skin.
- Raspberry pi: The Raspberry Pi is a low cost, **credit-card sized computer** that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high definition video, to making spreadsheets, word processing and playing games. The

Raspberry PI is used to connect the camera to the display device, from which the data is sent to the cloud. Various procedures, such as acquisition, pre-processing, segmentation, and clustering, are used to examine the acquired images

BASIC BLOCK DIAGRAM



INTERNAL PROCESS