



**CCIT FTUI**  
**FAKULTAS TEKNIK**

## **Project 1**

### **General Cancer Probability Prediction (GCPP)**

#### **Created by:**

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Riki Awal Syahputra (2120010136)

Rafie Ananda Suhermawan (2120010109)

#### **Class :**

**2ISA2**

#### **Faculty :**

Mhd. Idham Khalif, S.Kom

**CEP CCIT**

**FACULTY OF ENGINEERING UNIVERSITY OF INDONESIA**

**2022**

# **PROJECT ON**

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## **Developed by**

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The logo for NIIT (National Institute of Information Technology) is displayed in a large, bold, blue serif font. The letters are closely spaced and have a classic, institutional feel.

# **PROJECT ON**

## **General Cancer Probability Prediction (GCPP)**

Batch Code : 2ISA2

Start Date : 14<sup>st</sup> may 2022

End Date : 16<sup>st</sup> may 2022

Name Of Faculty : Mhd. Idham Khalif, S.Kom

Names of Developer :

Alfisyahrin Gusman (2120010016)

Riki Awal Syahputra (2120010136)

Rafie Ananda Suhermawan (2120010109)

Date of Submission : 16/05/2022



## **CERTIFICATE**

This is to certify that this report titled “General Cancer Probability Prediction (GCPP)” embodies the original work done by Alfisyahrin Gusman, Riki Awal Syahputra, and Rafie Ananda Suhermawan, project in partial fulfillment of their course requirement at NIIT.

Coordinator : Mhd. Idham Khalif, S.Kom

## **ACKNOWLEDGEMENT**

Praise be to God Almighty for giving the author the opportunity to complete this paper. It is because of His grace and guidance that the author was able to complete the paper entitled General Cancer Probability Prediction (GCPP).

GCPP's paper was prepared to fulfill the duties of a lecturer. In addition, the author also hopes that this paper can add insight for readers about GCPP.

The author expresses his deepest gratitude to Mr. Mhd. Idham Khalif, S.Kom as the lecturer of the course. The task that has been given can increase knowledge and insight related to the field occupied by the author. The author would also like to thank all those who have helped in the preparation of this paper.

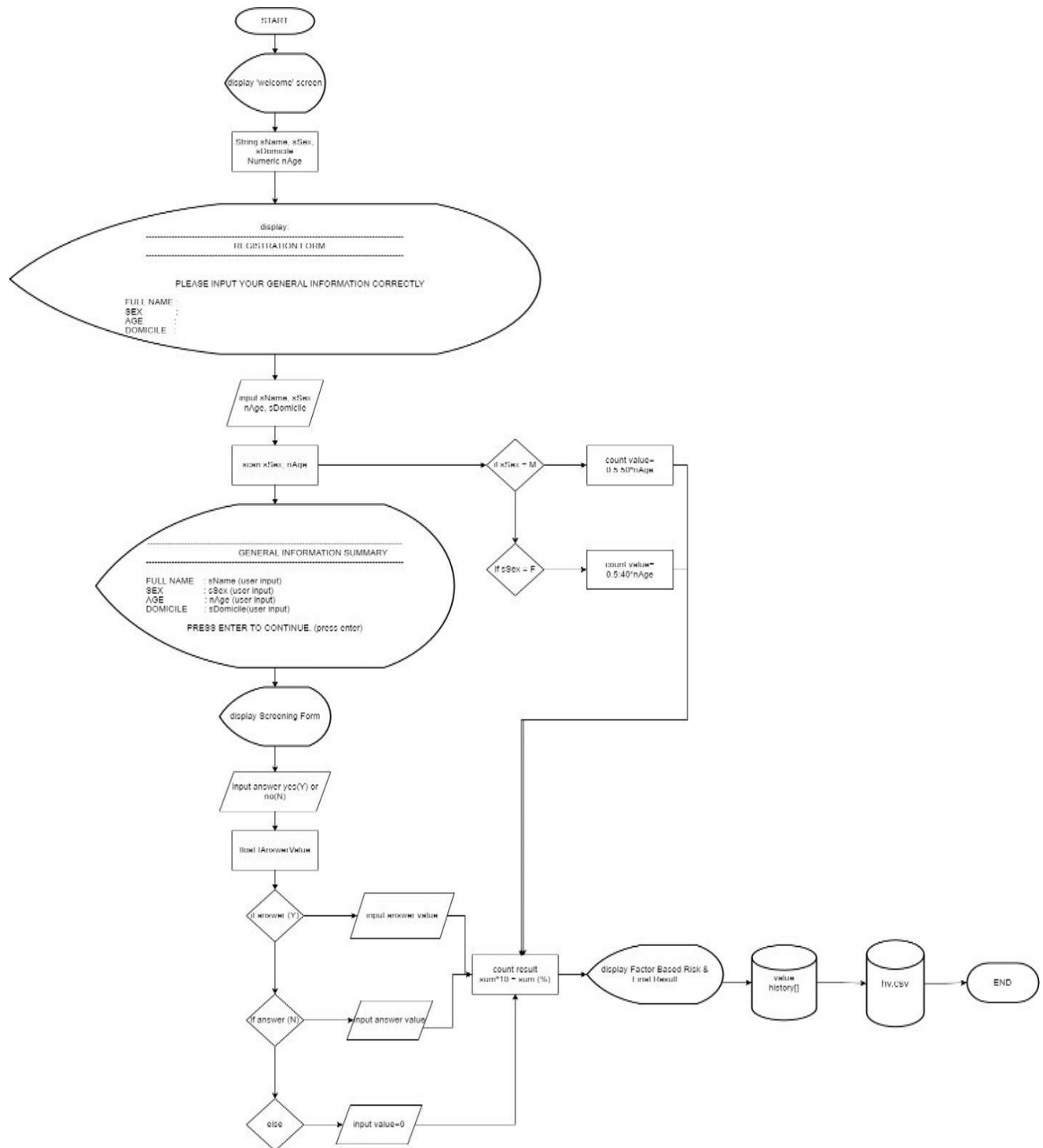
The author realizes that this paper is still far from perfect. Therefore, constructive criticism and suggestions will be accepted by the author for the perfection of this paper.

## SYSTEM ANALYSIS

### **System Summary:**

This is a simple command line Python application that can be used to analyze the likelihood of developing cancer symptoms. The questions themselves are written as a class (categorized according to predetermined criteria) to get the probability of getting cancer. Which has several questions such as name, age, gender and address. After that proceed to some general diagnostic questions with each question having a different value. After the question is completed, the score will be saved into a .csv file. This system helps many users to measure the likelihood of being affected by cancer symptoms.

# FLOWCHART GCPP



## THE CODE

```
from re import X

from time import sleep

from turtle import delay

import os

import csv

from csv import writer

import sys

import time


class ProgressBar(object):

    DEFAULT_BAR_LENGTH = 65

    DEFAULT_CHAR_ON = '■'

    DEFAULT_CHAR_OFF = ' '


    def __init__(self, end, start=0):

        self.end = end

        self.start = start

        self._barLength = self.__class__.DEFAULT_BAR_LENGTH


        self.setLevel(self.start)

        self._plotted = False


    def setLevel(self, level):

        self._level = level

        if level < self.start: self._level = self.start

        if level > self.end: self._level = self.end


        self._ratio = float(self._level - self.start) / float(self.end - self.start)

        self._levelChars = int(self._ratio * self._barLength)
```



```

def plotProgress(self):
    sys.stdout.write("\r  %3i%% [%s%s]" %(
        int(self._ratio * 100.0),
        self.__class__.DEFAULT_CHAR_ON * int(self._levelChars),
        self.__class__.DEFAULT_CHAR_OFF * int(self._barLength - self._levelChars),
    ))
    sys.stdout.flush()
    self._plotted = True

def setAndPlot(self, level):
    oldChars = self._levelChars
    self.setLevel(level)
    if (not self._plotted) or (oldChars != self._levelChars):
        self.plotProgress()

def __add__(self, other):
    assert type(other) in [float, int], "can only add a number"
    self.setAndPlot(self._level + other)
    return self

def __sub__(self, other):
    return self.__add__(-other)

def __iadd__(self, other):
    return self.__add__(other)

def __isub__(self, other):
    return self.__add__(-other)

def __del__(self):
    sys.stdout.write("\n")

class color:
    PURPLE = '\033[95m'
    CYAN = '\033[96m'
    DARKCYAN = '\033[36m'
    BLUE = '\033[94m'
    GREEN = '\033[92m'
    YELLOW = '\033[93m'

```

```

RED = '\033[91m'
BOLD = '\033[1m'
UNDERLINE = '\033[4m'
END = '\033[0m'

class inp:
    #LIST FOR STORING ALL DATA

    val = [] #value, this collect all value from the question and sum the inside
    hv = [] #historical value

    #LIST FOR REGISTRATION DATA
    nm = ['KIRO']
    sex = ['M']
    age = [17]
    dm = ['JKT']

    #LIST FOR STORING VALUE IN EACH CATEGORY OF QUESTION
    agec = []
    dsc = []
    ls = []
    job = []
    env = []
    vc = []
    dss = []
    inf = []

    #LIST FOR STORING ALL INPUT DATA IN EACH CATEGORY QUESTION TO SUM IT UP
    xls = []
    xjob = []
    xvc = []
    xinf = []

    def _nm(self,x):
        self.x = x
        inp.nm.append(x)

    def _sex(self,x):

```

```

        self.x = x

        inp.sex.append(x)
def _age(self,x):
    self.x = x

    inp.age.append(int(x))
def _dm(self,x):
    self.x = x

    inp.dm.append(x)


def _agec(self,x):
    self.x = x

    inp.agec.append(x)
def _dsc(self,x):
    self.x = x

    inp.dsc.append(x)
def _ls(self,x):
    self.x = x

    inp.ls.append(x)
def _job(self,x):
    self.x = x

    inp.job.append(float(x))
def _env(self,x):
    self.x = x

    inp.env.append(x)


def _vc(self,x):
    self.x = x

    inp.vc.append(x)
def _dss(self,x):
    self.x = x

    inp.dss.append(x)
def _inf(self,x):
    self.x = x

    inp.inf.append(x)


def _val(self,x):

```

```

        self.x = x

        inp.val.append(float(x))

    def _hv(self,x):

        self.x = x

        inp.hv.append(x)

def animate(a,count):

    print (a)

    pb = ProgressBar(count)

    #pb.plotProgress()

    for i in range(0, count):

        pb += 1

        #pb.setAndPlot(i + 1)

        time.sleep(0.01)

    del pb

def animate1(n,t):

    # String to be displayed when the application is loading

    load_str = n

    ls_len = len(load_str)

    # String for creating the rotating line

    animation = "|/-\\"

    anicount = 0

    # used to keep the track of

    # the duration of animation

    counttime = 0

    # pointer for travelling the loading string

    i = 0

    while (counttime != t):

```

```

# used to change the animation speed

# smaller the value, faster will be the animation
time.sleep(0.075)

# converting the string to list
# as string is immutable
load_str_list = list(load_str)

# x->obtaining the ASCII code
x = ord(load_str_list[i])

# y->for storing altered ASCII code
y = 0

# if the character is "." or " ", keep it unaltered
# switch uppercase to lowercase and vice-versa
if x != 32 and x != 46:
    if x>90:
        y = x-32
    else:
        y = x + 32
    load_str_list[i]= chr(y)

# for storing the resultant string
res = ''

for j in range(ls_len):
    res = res + load_str_list[j]

# displaying the resultant string
sys.stdout.write("\r"+res + animation[anicount])
sys.stdout.flush()

# Assigning loading string
# to the resultant string
load_str = res

```

```

        anicount = (anicount + 1)% 4

        i =(i + 1)% ls_len

        counttime = counttime + 1

# for windows OS
if os.name == "nt":
    os.system("cls")

# for linux / Mac OS
else:
    os.system("clear")

def wellcome():

    print('\t')
    print('█'*90)
    print('\t')
    print(color.BLUE+color.BOLD+'\t\tGENERAL CANCER PROBABILITY PREDICTION SYSTEM (GCPPS)'+
color.END)
    print('\t')
    print('█'*90)
    sleep(1)
    print('\t'*2)
    sleep(1)
    print(color.RED+'\t\t\t\t\t READ IT CAREFULLY! '+color.END)
    print('\t'*2)
    print('''
GCPP SYSTEM IS ONLY INTENDED FOR PREDICTION OF COVERING POTENTIAL CANCER RISK IN
GENERAL (NOT SPECIFIC) AND NOT FOR DIAGNOSIS, REFERENCE DATA COVERED THROUGH
cancer.net, halodoc.com, AND ATSDR (Agency for Toxic Disease Registry), FOR MORE
INFORMATION AND DISEASE REGISTRATION FURTHER, PLEASE CONTACT YOUR
DOCTOR OR EXPERT IN CANCER
''')
    sleep(2)

```









```

print('\t')

vc1 = input('(16) HAVE YOU EVER TAKEN THE HEPATITIS B VACCINATION? (Y/N) [')
vc2 = input('(17) HAVE YOU EVER TAKEN THE HPV VACCINATION? (Y/N) [')


dss = input('(18) DO YOU HAVE OBESITY? (Y/N) [')


inf1 = input('(19) ARE YOU SUFFERING WITH A DISEASE CAUSED BY THE HPV VIRUS? (Y/N) [')
inf2 = input('(20) DO YOU SUFFER A DISEASE CAUSED BY THE HEPATITIS B OR C VIRUS? (Y/N) [')
inf3 = input('(21) ARE YOU SUFFERING WITH A DISEASE CAUSED BY THE EPSTEIN-BARR VIRUS? (Y/N)
[')
inf4 = input('(22) ARE YOU SUFFERING WITH A DISEASE CAUSED BY H. PYLORI BACTERIA? (Y/N) [')


#DSC
if dsc == 'y' or dsc == 'Y':
    inp._val(inp,0.544782608695652)
    inp._dsc(inp,0.544782608695652)
else:
    inp._val(inp,0)
    inp._dsc(inp,0)


#LS
if ls1 == 'y' or ls1 == 'Y':
    inp._val(inp,0.424782608695651)
    inp.xls.append(0.424782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)


if ls2 == 'y' or ls2 == 'Y':
    inp._val(inp,0.414782608695651)
    inp.xls.append(0.414782608695651)
else:

```

```

inp._val(inp,0)
inp.xls.append(0)

if ls3 == 'y' or ls3 == 'Y':
    inp._val(inp,0.404782608695651)
    inp.xls.append(0.404782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

if ls4 == 'n' or ls4 == 'N':
    inp._val(inp,0.394782608695651)
    inp.xls.append(0.394782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

if ls5 == 'n' or ls5 == 'N':
    inp._val(inp,0.384782608695651)
    inp.xls.append(0.384782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

if ls6 == 'n' or ls6 == 'N':
    inp._val(inp,0.374782608695651)
    inp.xls.append(0.374782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

if ls7 == 'n' or ls7 == 'N':
    inp._val(inp,0.364782608695651)
    inp.xls.append(0.364782608695651)
else:
    inp._val(inp,0)

```

```

inp.xls.append(0)

if ls8 == 'n' or ls8 == 'N':
    inp._val(inp,0.354782608695651)
    inp.xls.append(0.354782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

if ls9 == 'n' or ls9 == 'N':
    inp._val(inp,0.344782608695651)
    inp.xls.append(0.344782608695651)
else:
    inp._val(inp,0)
    inp.xls.append(0)

xum = sum(inp.xls)
inp._ls(inp,xum)

#JOB

if job1 == 'y' or job1 == 'Y':
    inp._val(inp,0.524782608695651)
    inp.xjob.append(0.524782608695651)
else:
    inp._val(inp,0)
    inp.xjob.append(0)

if job2 == 'y' or job2 == 'Y':
    inp._val(inp,0.514782608695651)
    inp.xjob.append(0.514782608695651)
else:
    inp._val(inp,0)
    inp.xjob.append(0)

if job3 == 'y' or job3 == 'Y':

```

```

inp._val(inp,0.504782608695651)
inp.xjob.append(0.504782608695651)
else:
    inp._val(inp,0)
    inp.xjob.append(0)

if job4 == 'y' or job4 == 'Y':
    inp._val(inp,0.494782608695651)
    inp.xjob.append(0.494782608695651)
else:
    inp._val(inp,0)
    inp.xjob.append(0)

xum = sum(inp.xjob)
inp._job(inp,xum)

#ENV

if env == 'y' or env == 'Y':
    inp._val(inp,0.484782608695651)
    inp._env(inp,0.484782608695651)
else:
    inp._val(inp,0)
    inp._env(inp,0)

#VC

if vc1 == 'n' or vc1 == 'N':
    inp._val(inp,0.334782608695651)
    inp.xvc.append(0.334782608695651)
else:
    inp._val(inp,0)
    inp.xvc.append(0)

if vc2 == 'n' or vc2 == 'N':
    inp._val(inp,0.324782608695651)

```

```

        inp.xvc.append(0.324782608695651)
    else:
        inp._val(inp,0)
        inp.xvc.append(0)

xum = sum(inp.xvc)
inp._vc(inp,xum)

#DSS

if dss == 'y' or dss == 'Y':
    inp._val(inp,0.434782608695651)
    inp._dss(inp,0.434782608695651)
else:
    inp._val(inp,0)
    inp._dss(inp,0)

#INF

if inf1 == 'y' or inf1 == 'Y':
    inp._val(inp,0.474782608695651)
    inp.xinf.append(0.474782608695651)
else:
    inp._val(inp,0)
    inp.xinf.append(0)

if inf2 == 'y' or inf2 == 'Y':
    inp._val(inp,0.464782608695651)
    inp.xinf.append(0.464782608695651)
else:
    inp._val(inp,0)
    inp.xinf.append(0)

if inf3 == 'y' or inf3 == 'Y':
    inp._val(inp,0.454782608695651)
    inp.xinf.append(0.454782608695651)

```

```

else:
    inp._val(inp,0)
    inp.xinf.append(0)

if inf4 == 'y' or inf4 == 'Y':
    inp._val(inp,0.444782608695651)
    inp.xinf.append(0.444782608695651)
else:
    inp._val(inp,0)
    inp.xinf.append(0)

xum = sum(inp.xinf)
inp._inf(inp,xum)

#PRINT FOR CEK UP-----
# print('\t')
# print('-'*90)
# print('\t')
# print('VALUE DATA      : ',inp.val)
# print('\t')
# print('-'*90)
# print('\t')
# zum = sum(inp.val)
# print('TOTAL VALUE      : ',zum)
# print('\t')
# print('-'*90)
# print('\t')
# inp._hv(inp,zum)
# print('HISTORICAL VALUE : ',inp.hv)
# print('\t')
# print('-'*90)
# print('\t')
# print('AGEC VALUE      : ',inp.agec)
# print('DSC VALUE      : ',inp.dsc)
# print('LS VALUE       : ',inp.ls)
# print('JOB VALUE      : ',inp.job)

```

```

# print('ENV VALUE      : ',inp.env)
# print('VC VALUE       : ',inp.vc)
# print('DSS VALUE      : ',inp.dss)
# print('INF VALUE      : ',inp.inf)
# -----

def res():

    print('\t')
    animate1("learning your life pattern..",70)

    print('\t')
    print('-'*90)
    print(color.BOLD+'\t\t\t\tANALYZING THE PATTERN'+ color.END)
    print('-'*90)

    print('\t')
    animate('\t🔍 ACCESSING YOUR PROFILE', 200)
    print('\t')
    animate('\t🔍 CALCULATING YOUR FBR SCORE', 70)
    print('\t')
    animate('\t🔍 CALCULATING YOUR CRS SCORE', 250)
    print('\t')
    animate('\t🔍 SAVING YOUR DATA TO DATABASE', 300)
    print('\t')
    animate('\t🔍 ACCESSING YOUR DATA', 200)
    print('\t')

    zum = sum(inp.val)*10
    fres = '{}{}'.format(zum,'%')
    inp._hv(inp,fres)

    sleep(0.5)
    print('\t')
    print('-'*90)
    sleep(0.5)
    print(color.BOLD+'\t\t\t\t\tGCPP RESULT'+ color.END)

```



```

print('-'*90)

sleep(0.5)
print('\t')
print('[] FULL NAME      : ', inp.nm[-1])
sleep(0.4)
print('[] SEX            : ', inp.sex[-1])
sleep(0.3)
print('[] AGE            : ', inp.age[-1])
sleep(0.2)
print('[] DOMICILE       : ', inp.dm[-1])
sleep(1)
print('\t'*2)

print(color.BOLD+color.UNDERLINE+'\t\t\t F A C T O R   B A S E D   R I S K '+color.END)
print('\t')
sleep(1)
print('[] AGE              : ',str(inp.agec[-1]*10)+'%')
sleep(0.5)
print('[] GENETIC          : ',str(inp.dsc[-1]*10)+'%')
sleep(0.5)
print('[] LIFE STYLE       : ',str(inp.ls[-1]*10)+'%')
sleep(0.5)
print('[] JOB              : ',str(inp.job[-1]*10)+'%')
sleep(0.5)
print('[] ENVIRONMENT      : ',str(inp.env[-1]*10)+'%')
sleep(0.5)
print('[] VACCINATION      : ',str(inp.vc[-1]*10)+'%')
sleep(0.5)
print('[] DESEASE          : ',str(inp.dss[-1]*10)+'%')
sleep(0.5)
print('[] INFECTION         : ',str(inp.inf[-1]*10)+'%')
sleep(1.5)
print('\t')

print(color.YELLOW+color.BOLD+color.UNDERLINE+'\t\t\t C A N C E R   R I S K   S C O R E '+color.END)

```

```

sleep(2)

print('\t')

print('\t\t\t\t\t',fres)

print('\t')

print('.'*90)

def dbs():

    # The data assigned to the list

    list_data=[inp.nm[-1], inp.sex[-1], inp.age[-1], inp.dm[-1], inp.agec[-1], inp.dsc[-1],
inp.ls[-1], inp.job[-1], inp.env[-1], inp.vc[-1], inp.dss[-1], inp.inf[-1], inp.agec[-1]*10,
inp.dsc[-1]*10, inp.ls[-1]*10, inp.job[-1]*10, inp.env[-1]*10, inp.vc[-1]*10, inp.dss[-1]*10,
inp.inf[-1]*10, inp.hv[-1]]

    header = ['Name', 'Branch', 'Year', 'CGPA']

    f = open('HV.csv', 'a')

    # xy = csv.DictWriter(f, fieldnames = header)

    # xy.writeheader()

    with f:

        f = open('HV.csv', 'a', newline='')

        writer_object = writer(f)

        writer_object.writerow(list_data)

        # Close the file object

        f.close()

def start():

    os.system('cls||clear')

    wellcome()

    os.system('cls||clear')

    regist()

    os.system('cls||clear')

    screen()

    os.system('cls||clear')

    res()

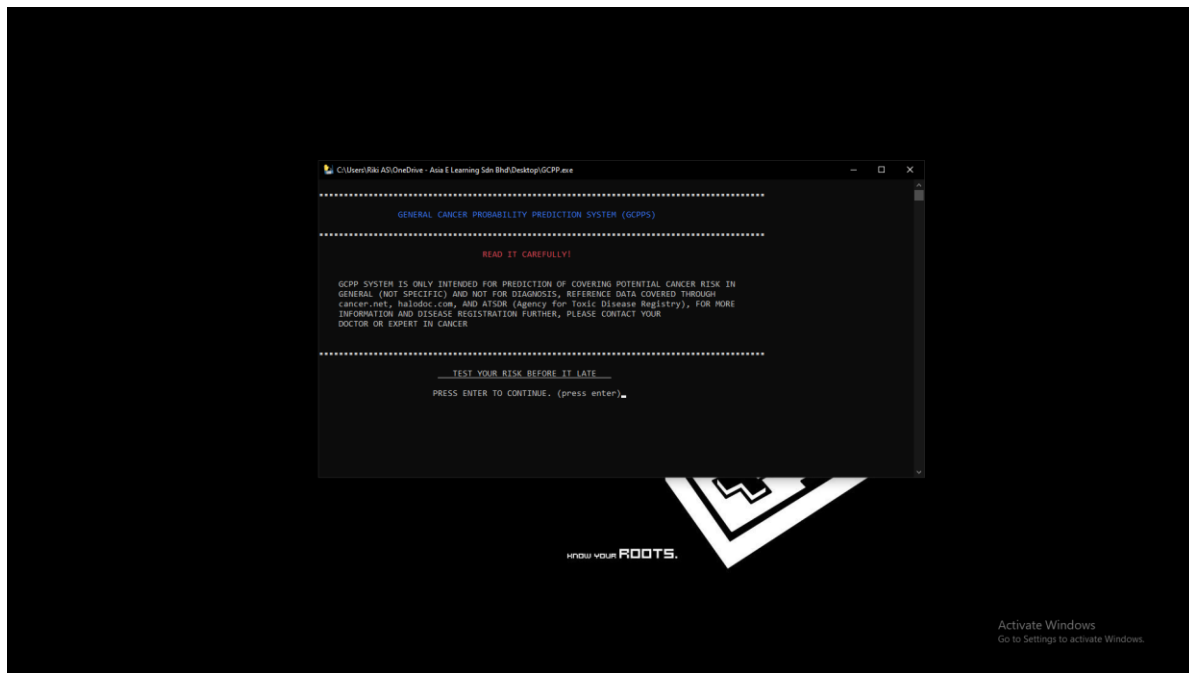
    dbs()

```

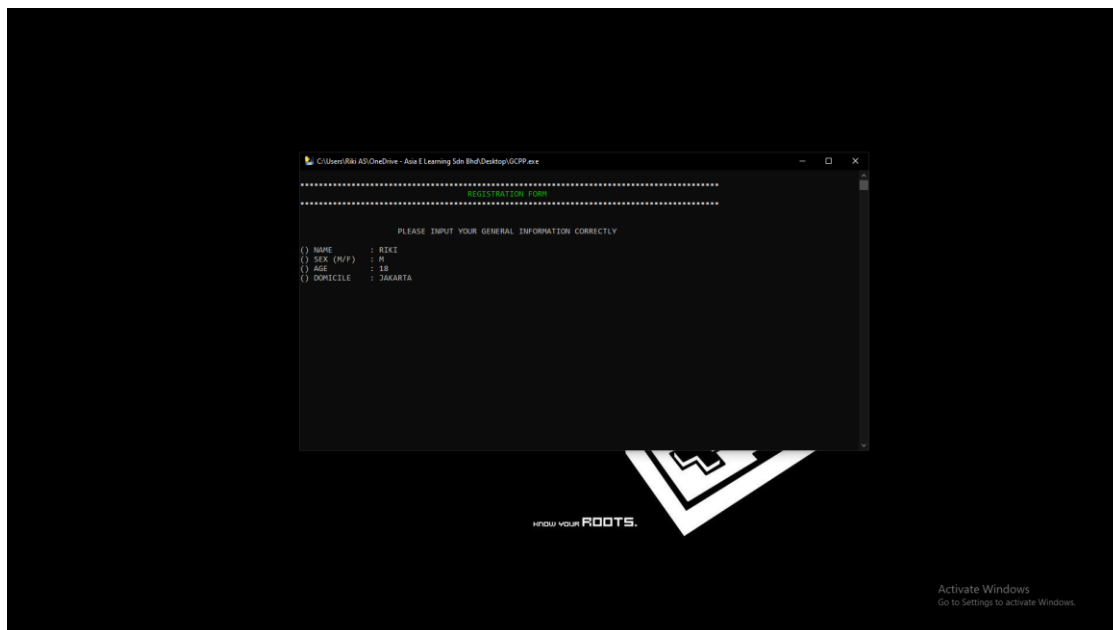
```
start()
```

# OUTPUT

## A. MAIN MENU SCREEN

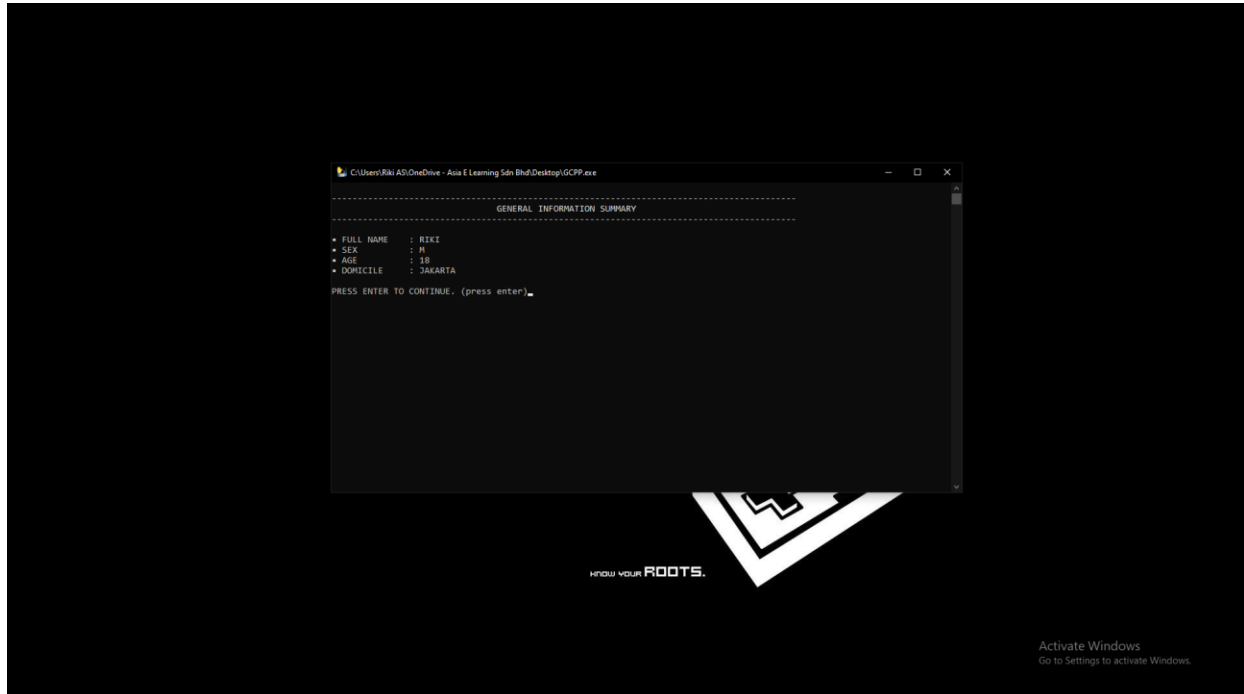


## B. REGISTRATION SCREEN

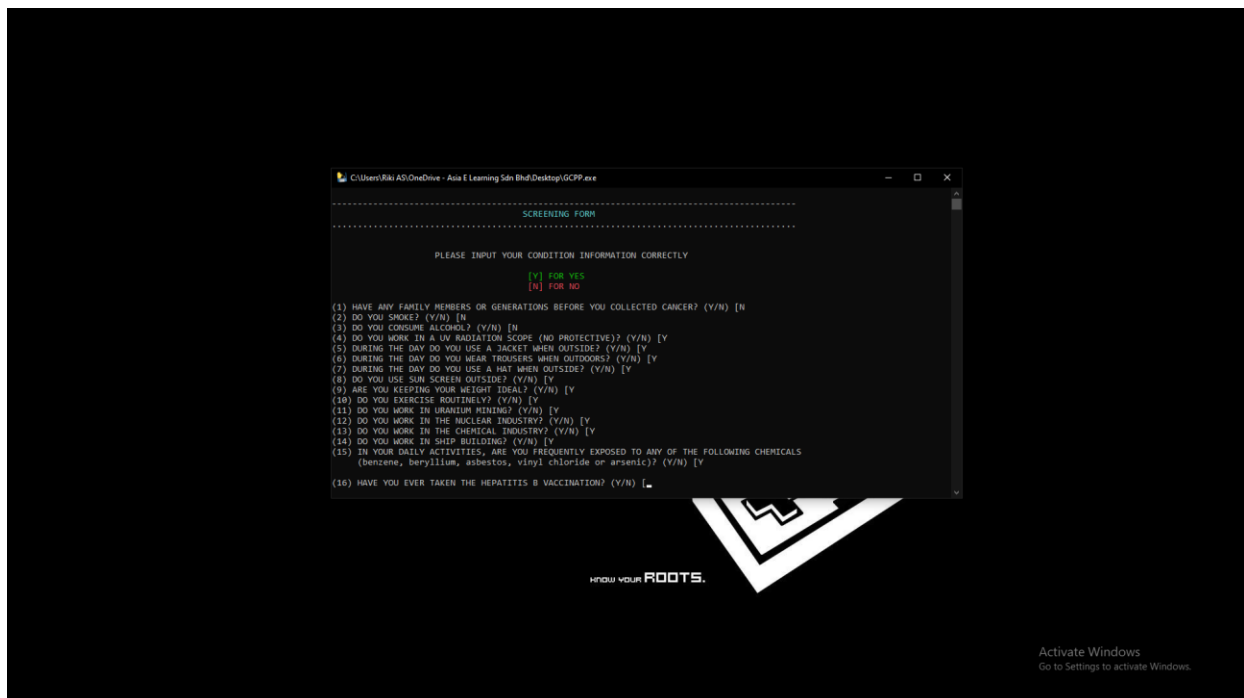


# OUTPUT

## C. VIEW AFTER REGISTRATION

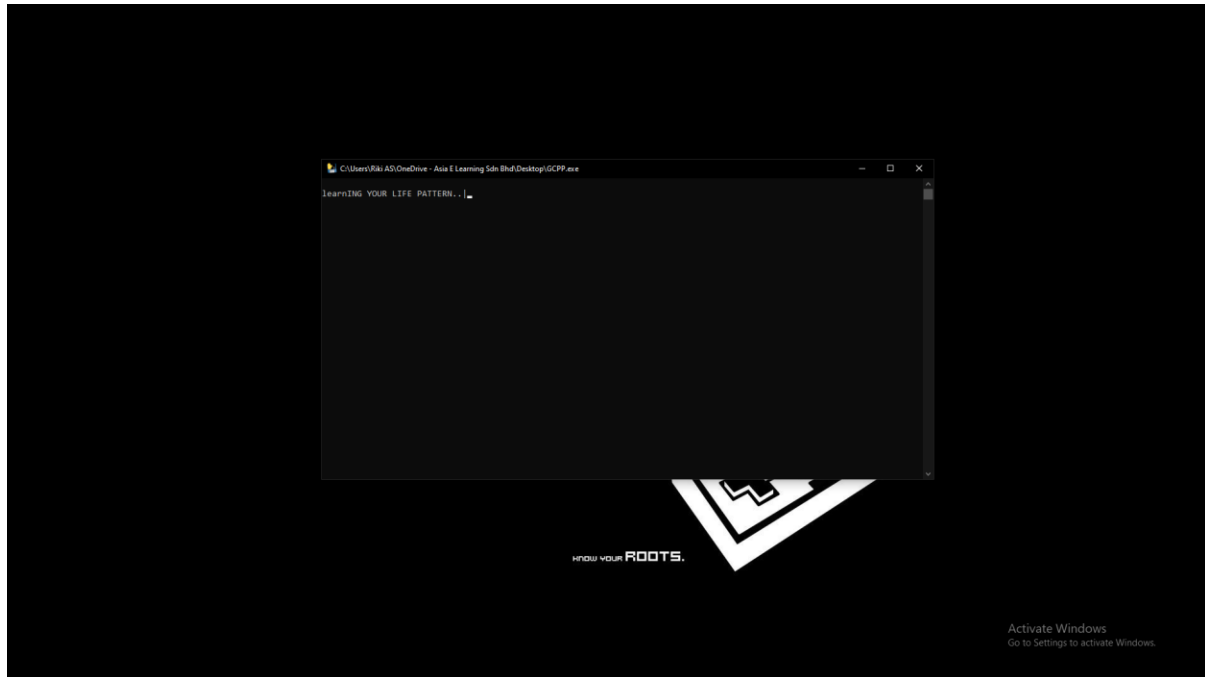


## D. COMPLAINT CHECKING PROCESS

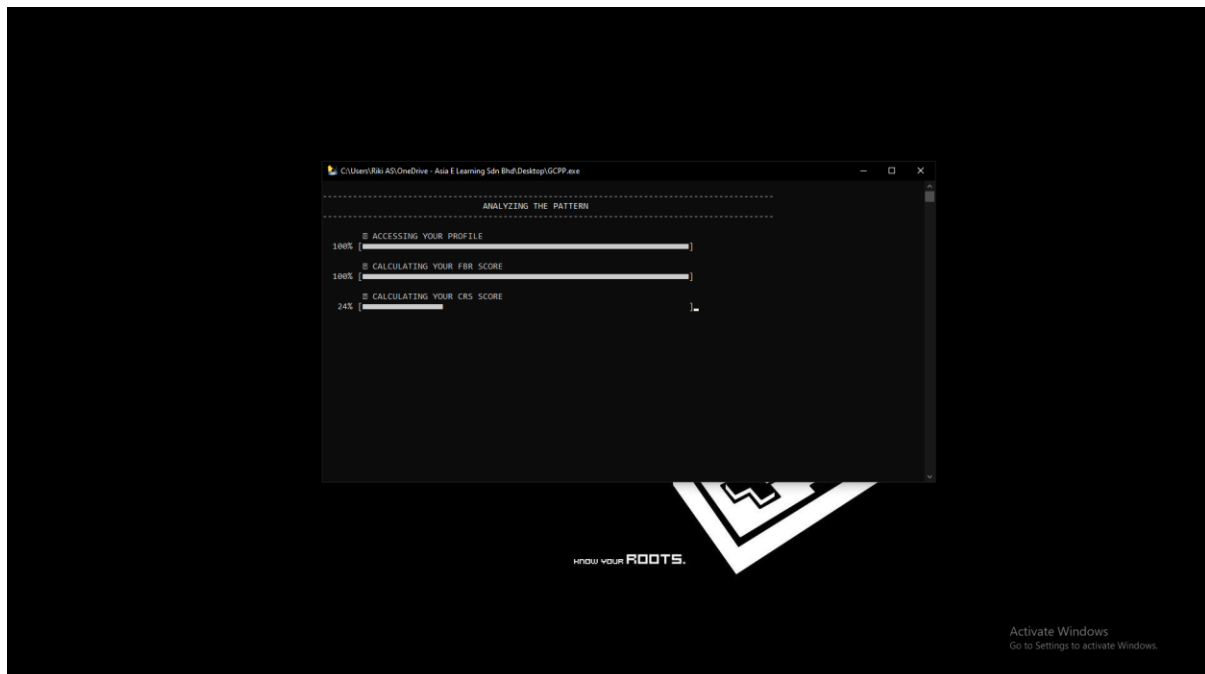


# OUTPUT

## E. CHECKING PROCESS

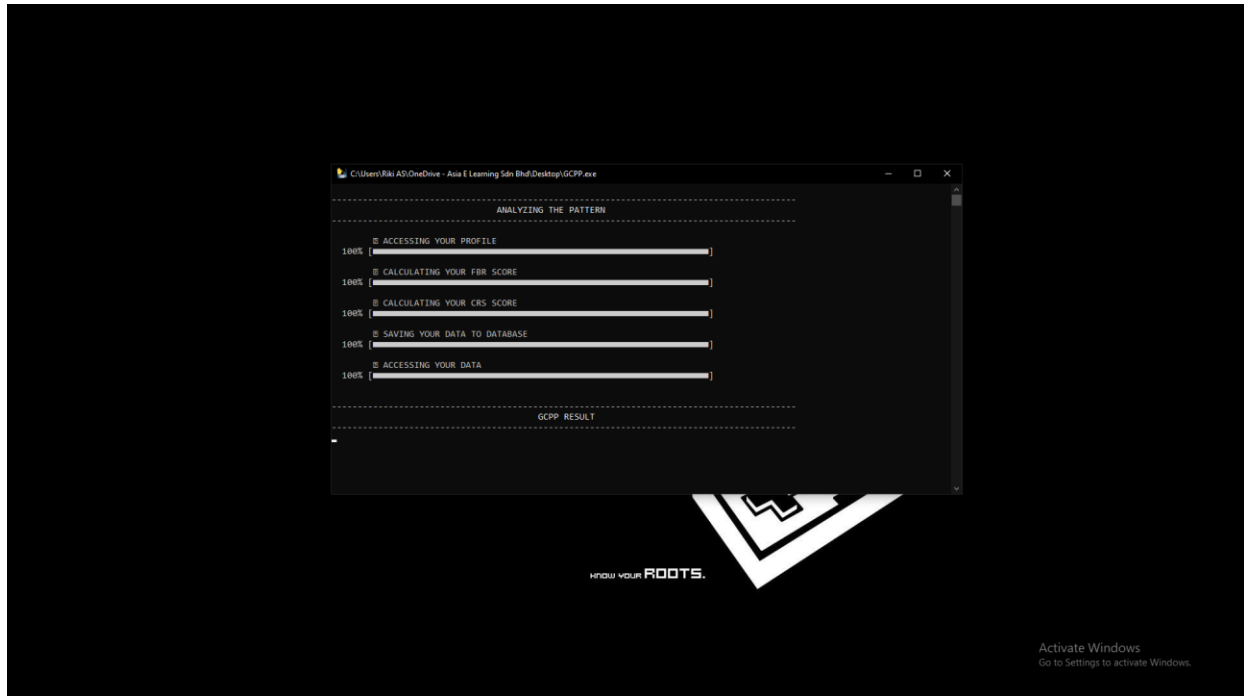


## F.

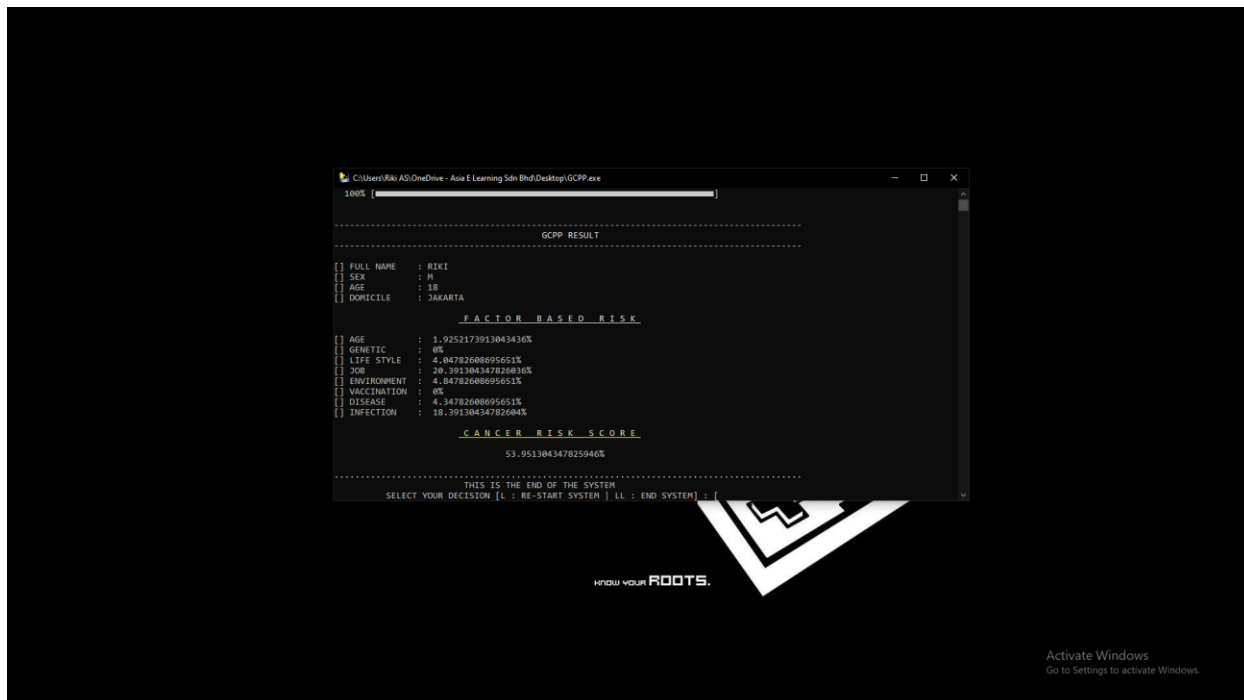


# OUTPUT

G.



H. OVERALL DIAGNOSIS



## CONFIGURATION

**Hardware :** Intel I7 gen 11, RAM 16 GB HDD 100 GB or 1 TB, Video graphic NVidia GeForce RTX 3080

**VGA Resolution :** 7680x4320

**Operating System :** Windows 11

**Software :** Command Prompt

Microsoft Word 2021

Microsoft Excel 2021



## **PROBLEM ENCOUNTERED**

Our team is facing a time managements challenge in this project which is caused by the re-scheduling of the education schedule, the developer also faces a lack of team communication and meeting also supported by our own busyness, but with this problem, the developer doesn't stop the movement of this project, and successfully to fix this problem as our challenge.