**ALGORITHM**

**Algorithm for main():**

Step 1: Start

Step 2:Login()

Step 3 :Stop

**Algorithm for login():**

Step 1: login()

Step 2: Initialize count=0

Step 3: Read user name

Step 4: Is file name as user name exist?

False: 1. Count++

2.If count =5

Then terminate program

Else goto Step 3

True : goto Step 5

Step 5: Initialize count =0

Step 6: Read password

Step 7: Does password exist as the content of the file ?

True : goto Step 7

False : 1.count++

2.*If* count = 5

Then terminate the program

else goto step 8

Step 8: home\_menu()

**Algorithm for home\_menu():**

Step 1: home\_menu()

Step 2: Display the home menu containing the option :

1. Data entry
2. Search
3. Edit
4. Marksheet
5. Change login user name and password
6. About
7. Exit

Step 3 : Read “choice”

Step 4 : Switch (choice)

1. Is choice =1 ?

True: i) call information()

ii) call datastore()

iii) Display menu :

1. Re-enter
2. Home\_menu
3. Search
4. Exit

iv) Read “op”

v) Switch(op):

1. Is op=1?

True: goto Step 4 (a)

False : goto next Step v (2)

1. Is op=2?

True: goto Step 2

False : goto next Step v 3

1. Is op=3?

True: goto Step 4 b

False : goto Step v 4

1. is op=4?

True: terminate the program

False:goto Step v 5

1. is op = any value but 1,2,3,4 ?

True :goto Step 4 a iii

False : goto next Step 4 b

1. Is choice=2?

True : i) call search() function

ii)goto Step 2

False : goto next Step 4 c

1. Is choice=3?

True: i) Display “do you want to re-write or delete the record”

ii) Read “opt”

iii) switch(opt)

1)is opt=’r’:

True: call rewrite() function

False : goto next Step

2) is opt= ‘d’:

True: call del() function

False : goto next Step

3) is opt = any value but ‘r’ & ‘d’ ?

True :goto 4 c

1. Is choice=4?

True: i)call marksheet() function

ii) goto Step 2

False: goto next Step

1. Is choice=5?

True: i) call account() function

ii) goto Step 2

False:goto next Step

1. Is choice=6?

True:i)call about() function

ii) goto Step 2

False: goto next Step

1. Is choice=7?

True: terminate the program

False : goto next Step

1. Is choice= any value but 1,2,3,4,5,6,7

Then Display “wrong value entered”

And goto Step 2

**Algotithm for information():**

Step 1: information()

Setp 2: Read student’s id no

Step 3 : Open file with name as id no in Read mode

Step 4: Is file opened ?

True: i) Display error message “id already exist”

ii)Display option “do you want to erase previous data

and create new one”

iii) Read “o” for choice

iv) Switch (o)

1) Is o=’y?’

True: goto Step 5

False :goto next Step

2) Is o=’n’ ?

True: goto Step 2

False : goto next Step

3) Is o= any value but ‘y’,’n’ ?

Then goto Step 4 (ii)

False: goto Step 5

Step 5: Read name, father’s name, roll no ,address, faculty ,level,

Mobile no, email address of the student

Step 6 : Stop

**Algorithm for datastore():**

Step 1: datastore()

Step 2: String concatenation - the student’s id with “.it”

Step 3 : Create file with name as student’s id in write mode

Step 4: Is file created?

True : i) put name, father’s name, roll no ,address, faculty ,level,

Mobile no, email address of the student in the file as file content

ii) Display success message “ data successfully stored”

False : i)Display error message “ sorry error to create database”

ii) Terminate the program

Step 5: Stop

**algorithm for search()**

Step 1: search()

Step 2: Read student’s id

Step 3 : string concatenation –the student’s id with “.it”

Step 4 : open file named as student’s id in Read mode

Step 5 : Is file open/exist?

True :i) Read file contents

ii) Display file contents

False: i)Display error message “sorry no file found “

ii) Display option to goto home\_menu or re-enter id

iii) Read “choice”

iv ) switch (choice)

1. Is choice=”h”?

True : call function home\_menu()

False :goto next Step

1. is choice = any value but “h”?

True : goto Step 2

Step 6 :Stop

**Algorithm for rewrite():**

Step 1: rewrite()

Step 2: Read student’s id

Step 3: string copy – student’s id to fname

Step 4:string concatenation –fname with “.it”

Step 5: open file named as fname in write mode

Step 6:is file opened?

False :i)Display error message “sorry failed to open a file”

ii) terminate the program

True :i) Read name, father’s name, roll no ,address, faculty ,level,

Mobile no, email address of the student

ii) call function datastore()

iii) call function home\_menu()

**Algorithm for del()**

Step 1 :del()

Step 2 : Read student’s id

Step 3 : string concatenation –the student’s id with “.it”

Step 4: open file named as the concatenated student’s id in Read mode

Step 5: is file opened/exist?

True: goto Step 6

False :i) Display error message ”sorry! Id didn’t match with our database”

ii)call function home\_menu()

Step 6 : remove file name as concatenated student’s id

Step 7 :Display success message “data has been successfully removed”

Step 8 : call home\_menu() function

**algorithm for account()**

Step 1: account()

Step 2:call function user\_ver*If*ication()

Step 3: Read new user name

Step 4: Read new password

Step 5: string concatenation – user name with ”.it”

Step 8:create file named as concatenation user name in write mode

Step 9: is file created ?

False:i) Display error message “’error to create new account

ii) Call home\_menu function()

True: i)Put new password in the file as file contents

ii) Display successful message “new user name and password

successfully created”

iii) String copy - pointer old user to old\_name

iv) Remove file named as old\_name

Step 10: Stop

**Algorithm for user\_verification()**

Step 1:User\_verification()

Step 2: Read old user name

Step 3:String concatenation-old user name with “.it”

Step 4:Open file named as old user name in Read mode

Step 5: Is file opened/exist ?

True: i)Read the content of the file as “pw”

ii) Read old password

iii)String compare old password and pw

iv) Are they same?

True: Stop

False :i)Display error message “user name and file didn’t match”

ii)Display option menu to goto home menu or reenter

password

iii) Read choice

iv) Switch (choice)

1. Is choice=’h’?

True :call home\_menu() function

False :goto next Step

1. Is choice = any character but ‘h’?

True:goto Step 5 (ii)

False :i)Display error message “user name incorrect”

ii) Display option message to re-enter user name or to go to home menu

iii)Read choice

iv) switch (choice)

a) is choice=’r’?

True:goto Step 2

False:goto next Step

b) Is choice=’h’

True : Call home\_menu() function

False : Goto next Step

c) Is choice =Any character but ‘h’ and ‘r’?

True: Goto Step ii

**algorithm for about()**

Step 1:about()

Step 2: Display information about the application software and all the other required

information

Step 3: Stop

**Algorithm for marksheet()**

Step 1: marksheet()

Step 2: Read faculty and level

Step 3: Read no of students (N)

Step 4: Read the name of subjects (5 subjects)-sub1,sub2,sub3,sub4,sub5

Step 5: Read the id,name ,and marks of sub1,sub2,sub3,sub4,sub5 of N students

Step 6: total marks of each students = (sub1+sub2+ sub3+sub4+sub5) of each students

Step 7: percentage of each students =(total marks of each students )/5

Step 8: assigning percentage in “div”

Step 9: Is div >=75 and marks of each subject >=32 ?

True: Display name of the student, marks of each subjects

,total marks,percentage,and division as “dist” ie distinction

False : goto Step 10

Step 10 : Is div <75 & >=60 and marks of each subject >=32 ?

True: Display name of the student, marks of each subjects

,total marks,percentage,and division as “firse”

False : goto Step 11

Step 11: Is div <60 & >=45 and marks of each subject >=32 ?

True: Display name of the student, marks of each subjects

,total marks,percentage,and division as “second”

False : goto Step 12

Step 12: Is div <60 & >=32 and marks of each subject >=32 ?

True: Display name of the student, marks of each subjects

,total marks,percentage,and division as “third”

False : goto Step 13

Step 13: If Step 9 to Step 12 conditions didn’t come True

then Display name of the student, marks of each subjects,

total marks,percentage,and division as “failed”

Step 14: Display option to save data or not or to exit

Step 15: Read choice

Step 16: Switch(choice)

1. Is choice=’y’?

True: i)Open file named as student id of nth student of array in Read

mode

ii) Is file opened/exist?

True :i)change integer percentage of nth student into string

percantage

ii) put the percentage of nth student in the file

False: i) Display error message “no file exist”

ii) continue; goto Step 16 a)(i)

False : goto next Step

1. Is choice =’Y’?

True: goto Step 16 (a)(i)

False:goto next Step

c ) Is choice=’n’

True: call home\_menu() function

False: goto next Step

1. Is choice=’N’

True: call home\_menu() function

False: goto next Step

1. Is choice=’e’

True: terminate the program

False: goto next Step

f) Is choice=any character but ‘y’,’Y’,’n’,’N’,’e’

True: goto Step 14