Didactics IT
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Attendence Management System

Done By :

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Acknowledgement

I take this opportunity to express my profound gratitude and deep regards to my faculty Prof. Arnab Chakraborty for his guidance, monitoring and constant encouragement throughout the course of this project. The blessing, help and guidance given by him time to time shall carry me a long way in the journey of life on which I am about to embark.

Sk Samim Islam

Project Objective

The Attendance Monitoring System (AMS) will primarily aim to automate the entire attendance taking process on a daily basis for the employees of any office,bank etc. Through this system, the employees will enter their daily attendance record instead of the manual process being conducted at the present moment. This will speed up the attendance taking process as well as facilitate efficient storage of data. There will be sufficient security measure undertaken both at the system level as well as the database level in order to ensure safe storage and flow of records to and from the database. The validation checks applied at the application level will ensure that the system will disallow any improper records, attendance records of a person being entered by another person and so on. A certain collection of query related reports would also ensure statistical record retrieval for the benefits of HRD as well as the Accounts department.

Users of this project are

- Administrator
- Employees

Roles of Administrator are

- Login using his/her password.
- Checking the worksheet daily of all employees.
- Checking the employees who entered late.
- Checking the early leave employees list.

Roles of Customer are

- Registering as new employee using authority password.
- Giving attendance while entering into office.
- Giving attendance while leaving out the office.

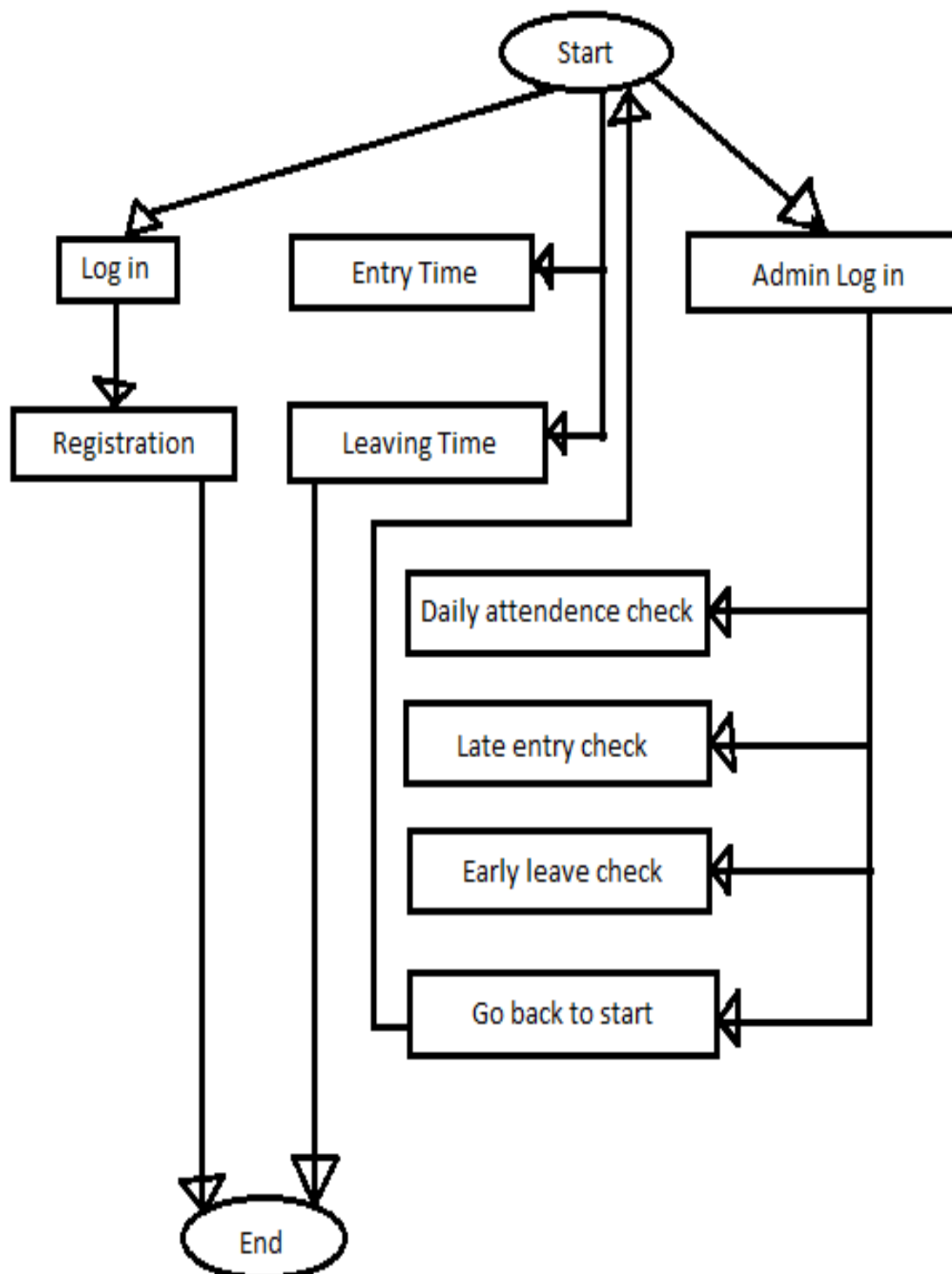# Requirement Specification

Processor   : Intel Pentium III or later

Main Memory (RAM)   : 256MB

Cache Memory   : 512KB

Monitor   : 14 inch Color Monitor

Keyboard   : 108 Keys

Mouse   : Optical Mouse

Hard Disk   : 160 GB

Software Requirement

- Python Interpreter ☐ Python package :
- Pandas ☐ Time
- pandas

Application Work flow

Database Design

Table: employee_list

Fields	Descriptions
employee_id	Create employee id While registration
employee_name	The name of employee
login_id	Create a log_in id
password	Create a password
address	Address of the employee
mob_no	Mobile number of employee

Table : attendance_list

Fields	Descriptions
emp_id	The id of employees fetched from employee_list table
emp_name	The name of employees fetched from employee_list table
log_in_time	The time of entry of employees
log_out_time	The time of leaving of employees

Code:

```python
import pymysql
import pandas as pd
import time

def menu():
    ch = 0
    while (ch < 6 or ch > 0):
        print("M A I N   M E N U...")
        print("~~~~~~~~~~~~~~~~~~~~")
        print("1 >New employee registration")
        print("2 >log in")
        print("3 >log out")
        print("4 > ADMINISTRATIVE log in")
        print("5 > E X I T...")
        print("~~~~~~~~~~~~~~~~~~~~")

        ch = int(input("Please enter your choice number -> "))
        return ch

choice = 0
while (choice != 5):
    choice = menu()
    if choice == 1:
        rp = int(input("Please enter password to register given by your company :"))
        if rp == 1234:
            try:
                print("welcome to all the new Employees")
                db = pymysql.connect("localhost", "root", "", "attendance_management")
                cursor = db.cursor()
                id1 = int(input("Enter the Id No. :"))
                name = input("Enter Name :")
                logid = input("Enter Username :")
                pass1 = input("enter password :")
                address = input("Enter Address :")
                mob = int(input("Enter Mobile No :"))
                ab = cursor.execute("insert into employee_list
                  values(%s,%s,%s,%s,%s,%s)", (id1, name, logid, pass1, address, mob))
                db.commit()
                print("Registered Successfully")
                db.close()
            except:
                print("Registration failed")
                choice = menu()
        else:
            print("You entered WRONG PASSWORD enter correct password to register :")

    elif choice == 2:
        print("welcome to login portal")
        db1 = pymysql.connect("localhost", "root", "", "attendance_management")
        cursor = db1.cursor()
        id1 = input("Enter the Log in Id :")
        name1 = input("Enter Password :")
        sql = "SELECT * FROM employee_list WHERE login_id='%s' AND password='%s'" % \
                                                        (id1, name1)
        cursor.execute(sql)
        data = cursor.fetchall()

        if (len(data) == 0):
            print("Wrong Username or password .....!!!!!    ")
            continue
        date1 = time.localtime()
        date2 = 0
        cursor.execute("insert into attendance_list values(%s,%s,%s,%s)",
                    (data[0][0], data[0][1], date1, date2))
        db1.commit()
        db1.close()
        print("you are successfully logged in")
```

```python
        elif choice == 3:
            print("welcome to logout portal")
            db2 = pymysql.connect("localhost", "root", "", "attendance_management")
            cursor = db2.cursor()
            id1 = input("Enter the login Id :")
            name2 = input("Enter Password :")
            sql = "SELECT * FROM employee_list WHERE login_id='%s' AND password='%s'" % \
                                                            (id1, name2)
            cursor.execute(sql)
            data = cursor.fetchall()

            if (len(data) == 0):
                print("Wrong Username or password .....!!!!!    ")
                continue
            date2 = time.localtime()
            cursor.execute("UPDATE attendance_list SET log_out_time = NOW()")
            db2.commit()
            db2.close()
            print("you are successfully logged out")

        elif choice == 4:
            cdbp = int(input("Enter Database password given by Authority :"))
            dbp = 123
            if cdbp == dbp:
                print("welcome admin to login portal")


                def sub_menu():
                    ch2 = 0
                    while (ch2 < 10 or ch2 > 5):
                        print("M A I N  M E N U...")
                        print("~~~~~~~~~~~~~~~~~~~~~")
                        print("6 >Admin check the worksheet daily")
                        print("7 >Admin late entry")
                        print("8 >Admin early leave")
                        print("9 > Go to main menu...")
                        print("~~~~~~~~~~~~~~~~~~~~~")
                        ch2 = int(input("Please enter your choice number -> "))
                        return ch2


                choice2 = 0
                while (choice2 != 10):
                    choice2 = sub_menu()
                    if choice2 == 6:
                        print("welcome admin to check the daily attendance of all the
                                                            employees")
                        db = pymysql.connect("localhost", "root", "",
                                                            "attendance_management")
                        cursor = db.cursor()
                        sql = "SELECT * FROM attendance_list"
                        try:
                            cursor.execute(sql)
                            results = cursor.fetchall()
                            columns = ['Emp Id', 'emp name', 'logintime', 'logouttime']
                            coll = pd.DataFrame([['', '', '', '']], columns=columns)
                            for row in results:
                                emp_id = row[0]
                                emp_name = row[1]
                                log_in_time = row[2]
                                log_out_time = row[3]

                                coll = coll.append(pd.DataFrame([[emp_id, emp_name,
                                        log_in_time, log_out_time]], columns=columns))
                            print(coll)
                        except:
                                print("Error: unable to fetch data")
                                db.close()
```

```python
            elif choice2 == 7:
                print("welcome admin in late entry checking portal :")
                db = pymysql.connect("localhost", "root", "",
                                                    "attendance_management")
                cursor = db.cursor()
                columns = ['Emp Id','Emp Name','logintime']
                coll=pd.DataFrame([['','','']],columns=columns)
                sql="SELECT * FROM attendance_list "
                cursor.execute(sql)
                data = cursor.fetchall()
                columns = ['Emp Id','Emp Name','logintime','logouttime']
                coll=pd.DataFrame([['','','','']],columns=columns)
                for row in data:
                        h2 = row[2].hour
                        m2 = row[2].minute
                        if(h2>=10 and m2>=0):
                            coll = coll.append(pd.DataFrame([[ row[0], row[1],
                                            row[2],row[3]]], columns=columns)
                print("Late entry Employees are:-")
                print(coll)
                db.close()

            elif choice2 == 8:
                print("welcome admin in early leave checking portal :")
                db = pymysql.connect("localhost", "root", "",
                                                    "attendance_management")
                cursor = db.cursor()
                sql = "SELECT * FROM attendance_list "
                cursor.execute(sql)
                data = cursor.fetchall()
                columns = ['Emp Id', 'Emp Name', 'logintime', 'logouttime']
                coll = pd.DataFrame([['', '', '', '']], columns=columns)
                for row in data:
                    h2 = row[3].hour
                    m2 = row[3].minute
                    if (h2 <= 18 and m2 >= 0):
                        coll = coll.append(pd.DataFrame([[ row[0], row[1], row[2],
                                            row[3]]], columns=columns))
                print("Early leave Employees are:-")
                print(coll)
                db.close()

            elif choice2 == 9:
                print("Accessing main menu......")
                break
                choice = menu()

            else:
                print("WRONG CHOICE ! Please enter your choice between 6 and 9")
        else:
            print("You are not authorized to access")

    elif choice == 5:
        print("exit......")
    else:
        print("WRONG CHOICE ! Please enter your choice between 1 and 5")
```

New employee registration:

```
M A I N  M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 1

Please enter password to register given by your company :1234

welcome to all the new Employees

Enter the Id No. :77
Enter Name :Sk Samim Islam
Enter Username :ss77
enter password :77ss
Enter Address :Krishnapur
Enter Mobile No :8240292161


Registered Successfully
```

Login Process:

```
M A I N  M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 2

welcome to login portal

Enter the Log in Id :ss77
Enter Password :77ss

you are successfully logged in
```

Logout Process:

```
M A I N   M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 3

welcome to logout portal

Enter the login Id :ss77
Enter Password :77ss

you are successfully logged out
```

Administrative Menu

Administrative log in:

```
M A I N   M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 4

Enter Database password given by Authority :123

welcome admin to login portal

M A I N   M E N U...
~~~~~~~~~~~~~~~~~~~
6 >Admin check the worksheet daily
7 >Admin late entry
8 >Admin early leave
9 > Go to main menu...
~~~~~~~~~~~~~~~~~~~
```

Admin check the worksheet daily:

```
S U B   M E N U...
~~~~~~~~~~~~~~~~~~~
6 >Admin check the worksheet daily
7 >Admin late entry
8 >Admin early leave
9 > Go to main menu...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 6

welcome admin to check the daily attendance of all the employees
```

	Emp Id	emp name	logintime	logouttime
0				
0	22	surya	2018-02-25 23:15:18	2018-02-27 18:18:39
0	22	surya	2018-02-25 23:23:46	2018-02-27 18:18:39
0	36	saathi	2018-02-26 10:52:48	2018-02-27 18:18:39
0	77	Sk Samim Islam	2018-02-27 18:16:25	2018-02-27 22:01:50

Admin late entry:

```
S U B   M E N U...
~~~~~~~~~~~~~~~~~~~~
6 >Admin check the worksheet daily
7 >Admin late entry
8 >Admin early leave
9 > Go to main menu...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 7

welcome admin in late entry checking portal :

Late entry Employees are:-
```

	Emp Id	Emp Name	logintime	
0				
0	22	surya	2018-02-25 23:15:18	2018-02-27 18:18:39
0	22	surya	2018-02-25 23:23:46	2018-02-27 18:18:39
0	36	saathi	2018-02-26 10:52:48	2018-02-27 18:18:39
0	77	Sk Samim Islam	2018-02-27 18:16:25	2018-02-27 22:01:50

Admin early leave:

```
S U B   M E N U...
~~~~~~~~~~~~~~~~~~~
6 >Admin check the worksheet daily
7 >Admin late entry
8 >Admin early leave
9 > Go to main menu...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 8

welcome admin in early leave checking portal :

Early leave Employees are:-

  Emp Id Emp Name           logintime            logouttime
0
0    22     surya  2018-02-25 23:15:18  2018-02-27 18:18:39
0    22     surya  2018-02-25 23:23:46  2018-02-27 18:18:39
0    36     saathi 2018-02-26 10:52:48  2018-02-27 18:18:39
```

Go to main menu:

```
S U B   M E N U...
~~~~~~~~~~~~~~~~~~~
6 >Admin check the worksheet daily
7 >Admin late entry
8 >Admin early leave
9 > Go to main menu...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 9

Accessing main menu......

M A I N   M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number ->
```

Exit:

```
M A I N   M E N U...
~~~~~~~~~~~~~~~~~~~
1 >New employee registration
2 >log in
3 >log out
4 > ADMINISTRATIVE log in
5 > E X I T...
~~~~~~~~~~~~~~~~~~~

Please enter your choice number -> 5
exit......
```

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Certificate

This is to certify that Mr.Sk Samim Islam of Techno India Batanagar (MAKAUT), **registration number: xxxxxxxxx has successfully completed a project on "Attendence Management System" using Python under the guidance of Prof. Arnab Chakraborty**

Director

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