

Study Hall School, Lucknow



**PROJECT REPORT
ON
EXAM MANAGEMENT SYSTEM**

**A DISSERTATION SUBMITTED TO CENTRAL BOARD OF SECONDARY
EDUCATION IN THE FULFILLMENT OF ALL INDIA SENIOR SCHOOL
CERTIFICATE EXAMINATION(MAIN),2022-2023**

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My sincere thanks to Mrs. Seema Chauhan, my computer teacher for enlightening me with ideas to begin with the project and for her able guidance which has contributed to the completion of it.

Also, I would like to extend my thanks towards my parents for their help and support.

CERTIFICATE

This is to certify that Anshumaan Vikram Singh, Dron Pande and Shivansh Singh of class XII of STUDY HALL school have successfully completed the computer project titled “Centerium: An Exam Management System” under the guidance of their subject teacher as per the CBSE curriculum within the specified time.

Mrs. Seema Chauahan
(Computer Teacher)

Mrs. Meenakshi Bahadur
(Principal, Study Hall)

ABOUT PROJECT

The aim of the project is to create a tracking database for Examination Centers throughout India that can be used primarily for competitive examinations and for board examinations. This system would assist agencies/organizations to conduct the exams in a more systematic, efficient and streamlined manner.

The database system is a unique attempt at optimizing the current state of exams in the country and to provide a viable solution to erroneous student tracking.

The project is a tracking database that will:

1. Streamline the process of registration (Agencies use websites for this, largely developed very recently.)
2. Provide Live Exam Center Tracking: This feature of Centerium is one that allows for systematic logging of the details of the candidate as well as his/her answers. This will assist examination centers and prevent mishaps such as improper logging of answers, deletion of the candidates' information, etc.

The registration database will contain the following details:

1. Candidate Name
2. Candidate Roll Number
3. Date of Birth
4. School Name
5. Center Choice of the candidate
6. Date and Time of Registration

The live exam center tracking database system will contain the following details:

- 1. Candidate Name**
- 2. Candidate Roll Number**
- 3. Date of Birth**
- 4. Answers submitted by the candidate**
- 5. Video Recording of the Candidate attempting the paper (The USP/Differentiator of Centerium; This feature is an innovative attempt as an anti-cheating measure that ensures minimal cheating chances)**

The Tools used to create the project are as follows:

- 1. Python**
- 2. Visual Studio Code**
- 3. MySQL**
- 4. Canva**
- 5. Google Docs**
- 6. Microsoft Word**

The Working Principles/Knowledge as a prerequisite to this project has been acquired from:

- 1. CS50 at Harvard University (through EdX)**
- 2. FreeCodeCamp.org**

CODE SNIPPETS

```
1  import mysql.connector as sqltor
2  import numpy as np
3  import cv2 as cv
4
5  mycon = sqltor.connect(host="localhost",user="root",passwd="",database="registration")
6  if mycon.is_connected() == False:
7      print('Error connecting to database')
8  cursor = mycon.cursor()
9  print("Accessing Candidate Database")
10 var = str(input("Enter roll number you want searched:"))
11 sql = "select * from nta where rollno = " + var + ";"
12 data = cursor.execute(sql)
13 myresult = cursor.fetchall()
14 print("data of student", myresult)
15
16 choice = int(input("Do you wish to open the video recording of the exam hall ? (1.Yes/2. No)"))
17 if choice == 1:
18     cap = cv.VideoCapture("file.mp4")#FILE NAME / SOURCE FROM CURSOR
19     while cap.isOpened():
20         ret, frame = cap.read()
21         # if frame is read correctly ret is True
22         if not ret:
23             print("Can't receive frame (stream end?). Exiting ...")
24             break
25         gray = cv.cvtColor(frame, cv.COLOR_BGR2GRAY)
26         cv.imshow('frame', gray)
27         if cv.waitKey(1) == ord('q'):
28             break
29     cap.release()
30     cv.destroyAllWindows()
31
32 else:
33     print("Not showing the video.")
```

Code Snippet 1

```

1 import csv
2 import datetime
3 # In the beginning programmer created the SQL Database and Python Program.
4 # Programme made by Anshumaan Vikram Singh, Dron Pande, Shivansh Singh from Study Hall School
5
6 def register():
7     while True:
8         name = input("Enter candidate's name: ")
9         rollno = int(input("Enter roll number: "))
10        dob = input("Enter date of birth (YYYY/MM/DD): ")
11        school = input("Enter School Name: ")
12        while True:
13            print("Please pick a center of your choice: \n1.Mumbai\n2.Delhi\n3.Kanpur\n4.Lucknow")
14            choice = int(input("Enter your selection: (1,2,3,4): "))
15            if choice == 1:
16                centername = "Mumbai"
17                break
18            elif choice == 2:
19                centername = "Delhi"
20                break
21            elif choice == 3:
22                centername = "Kanpur"
23                break
24            elif choice == 4:
25                centername = "Lucknow"
26                break
27            else:
28                print("That is not an option. Try again.")
29
30        with open("regis.csv",'a') as f:
31            pen = csv.writer(f)
32            pen.writerow([name,rollno,dob,school,centername])
33            print("Data Added")
34            choice2 = int(input("Add more data ?\n1.Yes\n2.No\n == "))
35            if choice2 == 2:
36                break
37
38    print("Current Date and Time(YYYY-MM-DD H:MIN:SEC): ", datetime.datetime.now(),"\n\n")
39    register()

```

Code Snippet 2

```

1 CREATE TABLE nta (
2     rollno int,
3     name varchar(255),
4     dob date,
5     answers varchar(255)
6 );
7
8 INSERT INTO nta (rollno, name, dob, answers)
9 VALUES ('1', 'anshu', '2004-12-01', 'abcdabcdabcdabcdabcdabcd');
10
11
12 INSERT INTO nta (rollno, name, dob, answers)
13 VALUES ('2', 'shiv', '2004-12-02', 'abcdabcdabcdabcdabcdabcd');
14
15
16 INSERT INTO nta (rollno, name, dob, answers)
17 VALUES ('3', 'druv', '2004-12-03', 'abcdabcdabcdabcdabcdabcd');

```

```

mysql> select * from nta;
+-----+-----+-----+-----+
| rollno | name  | dob      | answers |
+-----+-----+-----+-----+
| 1      | shiv  | 2004-12-01 | abcdabcdabcdabcdabcdabcd |
| 2      | anshu | 2004-12-02 | abcdabcdabcdabcdabcdabcd |
| 3      | druv  | 2004-12-03 | abcdabcdabcdabcdabcdabcd |
+-----+-----+-----+-----+
3 rows in set (0.03 sec)

```

Code Snippet 3

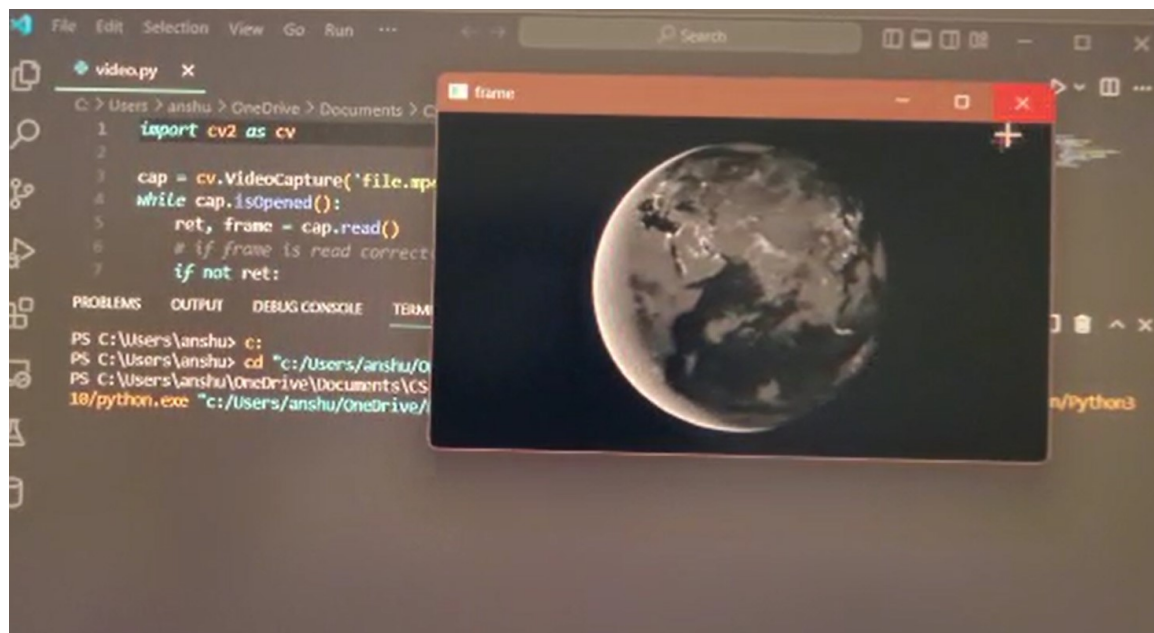
OUTPUT

```
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\Student\Desktop\Centerium\regis.py =====
Current Date and Time(YYYY-MM-DD H:MIN:SEC): 2023-02-03 12:24:46.598797

Enter candidate's name: Dron Pande
Enter roll number: 4
Enter date of birth (YYYY/MM/DD): 2005/11/15
Enter School Name: Study Hall
Please pick a center of your choice:
1.Mumbai
2.Delhi
3.Kanpur
4.Lucknow
Enter your selection: (1,2,3,4): 1
Data Added
Add more data ?
1.Yes
2.No
== 1
Enter candidate's name: Anshumaan Singh
Enter roll number: 569
Enter date of birth (YYYY/MM/DD): 2004/11/07
Enter School Name: Study Hall
Please pick a center of your choice:
1.Mumbai
2.Delhi
3.Kanpur
4.Lucknow
Enter your selection: (1,2,3,4): 2
Data Added
Add more data ?
1.Yes
2.No
== 1
Enter candidate's name: Shivansh Singh
Enter roll number: 420
Enter date of birth (YYYY/MM/DD): 2004/12/14
Enter School Name: Father Agnel
Please pick a center of your choice:
1.Mumbai
2.Delhi
3.Kanpur
4.Lucknow
Enter your selection: (1,2,3,4): 3
Data Added
```

```
Add more data ?
1.Yes
2.No
== 1
Enter candidate's name: Advait Mishra
Enter roll number: 7
Enter date of birth (YYYY/MM/DD): 2006/03/10
Enter School Name: Aarushi Land
Please pick a center of your choice:
1.Mumbai
2.Delhi
3.Kanpur
4.Lucknow
Enter your selection: (1,2,3,4): 4
Data Added
Add more data ?
1.Yes
2.No
== 1
Enter candidate's name: Gurkeerat Singh
Enter roll number: 0
Enter date of birth (YYYY/MM/DD): 2004/06/09
Enter School Name: Khalistan
Please pick a center of your choice:
1.Mumbai
2.Delhi
3.Kanpur
4.Lucknow
Enter your selection: (1,2,3,4): 4
Data Added
Add more data ?
1.Yes
2.No
== 2
>>>
```

1	Dron Pande	4	15-11-2005	Study Hall	Mumbai		
2							
3	Anshumaan Singh	569	07-11-2004	Study Hall	Delhi		
4							
5	Shivansh Singh	420	14-12-2004	Father Agnel	Kanpur		
6							
7	Advait Mishra	7	10-03-2006	Aarushi Land	Lucknow		
8							
9	Gurkeerat Singh	0	09-06-2004	Khalistan	Lucknow		
10							
11							
12							
13							



The applications of this project are outlined below:

1. Can be used in examination centres throughout the nation to provide a solution to D-Day mishaps such as the ones that occurred in the JEE Mains examination, July Shift, 2022;
2. Can be further designed to be a one-stop solution for all the needs of an exam conducting body from the registration process to the declaration of the results;
3. Can be integrated into other organisations that require monitoring of a set of people, such as in corporate offices to prevent espionage as well as to maintain CSR in workplaces.

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