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DEPARTMENT OF COMPUTER ENGINEERING

YEAR 2021-22

TERM - 5

REPORT

AUDIT COURSE (AC-V)

CLASS - TE COMPUTER ENGG.(SHIFT A)

NAME - PRATIK PINGALE

ROLL NO. - 19C0056

BATCH - C

FACULTY – MR. SUMEDH DHENGRE.



TIME TABLE SCHEDULER

CLASS – COMPUTER TE 1

Name – PRATIK PINGALE

Roll No – 19CO056

ABSTRACT AND INTRODUCTION

- The project is developed to automatically generate timetable and schedule classes without clashing with each other.
- Timetable scheduler is capable of auto-generating separate timetable for Teachers and Rooms in the Institute based on the Class timetable created/auto-generated by the user.
- This will allow User to create and modify timetables easily and have them hosted online so that they can be retrieved easily.
- We can easily modify or update timetable incase new classes are added.

CONSTRAINTS SATISFIED

Hard Constraints

- Unique class timing.
- Course students \leq room seating capacity.
- Two classes don't have same room.
- Class timing for each teacher is unique.
- Teachers are allocated to their course accordingly.

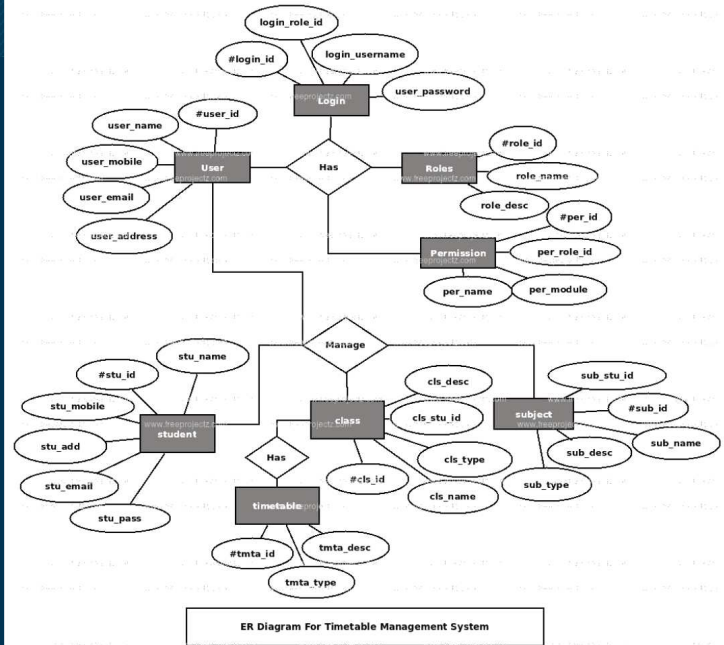
Soft Constraints

- classes are allotted according to section requirements.
- All courses are according to their department.
- Even distribution of course in a section per week.

SOFTWARE REQUIREMENTS:-

- OPERATING SYSTEM :- WINDOWS/LINUX
- SOFTWARE :-
PYTHON = 3.9.5
DJANGO = 3.2.9

SCHEMA



OPERATIONS ON THE SYSTEM

- THE USER WILL HAVE TO FEED THE FOLLOWING INFORMATION TO GET THE TIME TABLE :-
 1. INSTRUCTOR ID AND NAME
 2. ROOM NUMBER AND SEATING CAPACITY
 3. MEETING TIME
 4. NAME OF THE COURSE
 5. DEPARTMENT NAME
 6. SECTION NAME

OPERATION :-

- AFTER FILLING THE INFORMATION IN THE GIVEN WINDOW AND SELECTING GIVEN OPTIONS THE USER WILL GET A OPTION TO GENERATE TIMETABLE.
- AND NOW AFTER FEW SECONDS YOU WILL SEE THE FINAL TIME TABLES ON THE SCREEN IN A ORGANIZED MANNER.
- THE TIMETABLES WILL BE ACCORDING TO SPECIFIC DEPARTMENT, INSTRUCTOR AND SECTION.
- NOW ACCORDING TO YOUR REQUIREMENTS YOU HAVE RECEIVED YOUR TIMETABLE BUT IF YOU WANT TO CHANGE OR UPDATE YOU CAN EASILY DO THAT.

SYSTEM TESTING

- Software testing can be stated as the process of verifying and validating that software or application is bug-free, meets the technical requirements as guided by its design and development, and meets the user requirements effectively and efficiently with handling all the exceptional and boundary cases.
- **Unit Testing** is a software testing technique by means of which individual units of software i.e. group of computer program modules, usage procedures and operating procedures are tested to determine whether they are suitable for use or not. It is a testing method using which every independent modules are tested to determine if there are any issue by the developer himself.
- **Integration testing** is the process of testing the interface between two software units or module. It's focus on determining the correctness of the interface. The purpose of the integration testing is to expose faults in the interaction between integrated units. Once all the modules have been unit tested, integration testing is performed.

TYPES OF TESTING

- **White box** testing techniques analyze the internal structures the used data structures, internal design, code structure and the working of the software rather than just the functionality as in black box testing. It is also called glass box testing or clear box testing or structural testing.
- **Integration Test** Case differs from other test cases in the sense it focuses mainly on the interfaces & flow of data/information between the modules. Here priority is to be given for the integrating links rather than the unit functions which are already tested.

Advantages

- Faculty did not need to worry about time clashes.
- Authority now does not need to perform permutation and combination.
- Authority can concentrate on other things rather than wasting their time on preparing Time-Table.
- Substitution Management made easy.
- And one of the most important things, no more paperwork.

Future Work

- MORE FEATURES SUCH AS SCHEDULE PRINT FOR INDIVIDUAL FACULTY ETC. WOULD ALSO BE INVOLVED TO MAKE THIS MORE USEFUL AS A FINAL PRODUCT.
- IN FUTURE EXPORTING TIMETABLE IN VARIOUS FORMATS WILL BE AVAILABLE.
- FASTER PROCESSING OF SCHEDULE AND IMPROVEMENTS IN THE ALGORITHM

SCREENSHOTS :- LOGIN

Time-Table Scheduler
Schedule Timetable with ease

[Home](#) [Instructor](#) [Room](#) [Meeting time](#) [Course](#) [Department](#) [Section](#)



Timetable Generator

Let our Artificial Intelligence schedule your classes. Add your university class details and generate Time Table.

Generate Timetable

Login

WELCOME TO



**AISSMS
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PUNE**

<http://aissmscoe.com/>

Sign In

User Name

Password

Login

INSERTING INSTRUCTOR

Time-Table Scheduler
Schedule Timetable with ease

Home [Instructor](#) Room Meeting time Course Department Section

Add Instructor

Edit Instructor

Instructor ID:

Instructor Name:

SUBMIT

Add Instructor

Edit Instructor

UID	Name	
T1	SGD	X
T2	DPG	X
T3	MMS	X
T4	SFS	X
T5	NF1	X
T6	MAP	X
T7	SRN	X
T8	WW	X
T9	AJK	X
T10	NF2	X
T11	AMJ	X
T12	SVA	X
T13	DMU	X
T14	NRT	X
T15	NR	X

INSERTING ROOM

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Home Instructor Room Meeting time Course Department Section

Add Room

Room Number:

Seating capacity:

SUBMIT

Edit Rooms

Time-Table Scheduler
Schedule Timetable with ease

Home Instructor Room Meeting time Course Department Section

Add Room

Edit Rooms

Room No.	Seating Capacity
1	60

INSERTING MEETING TIME

Time-Table Scheduler
Schedule Timetable with ease

Home Instructor Room Meeting time Course Department Section

Add Meeting timeEdit Meeting time

Pid:

Time:

8:45 - 9:45

Day:

SUBMIT

Add Meeting time Edit Meeting time

PID	Day	Timing	
M1	Monday	8:45 - 9:45	X
M2	Monday	10:00 - 11:00	X
M3	Monday	11:00 - 12:00	X
M4	Monday	1:00 - 2:00	X
M5	Monday	2:15 - 3:15	X
T1	Tuesday	8:45 - 9:45	X
T2	Tuesday	10:00 - 11:00	X
T3	Tuesday	11:00 - 12:00	X
T4	Tuesday	1:00 - 2:00	X
T5	Tuesday	2:15 - 3:15	X
W1	Wednesday	8:45 - 9:45	X
W2	Wednesday	10:00 - 11:00	X
W3	Wednesday	11:00 - 12:00	X
Th1	Thursday	8:45 - 9:45	X
Th2	Thursday	10:00 - 11:00	X
Th3	Thursday	11:00 - 12:00	X
Th4	Thursday	1:00 - 2:00	X
F1	Friday	8:45 - 9:45	X
F2	Friday	10:00 - 11:00	X
F3	Friday	11:00 - 12:00	X
F4	Friday	1:00 - 2:00	X
W4	Wednesday	1:00 - 2:00	X

INSERTING COURSE

Time-Table Scheduler
Schedule Timetable with ease

Home Instructor Room Meeting time Course Department Section

Add Course

Course number:

Course name:

Maximum students:

Instructors:

T1 SGD
T2 DPG
T3 MMS
T4 SFS
T5 NF1
T6 MAP

SUBMIT

Edit Courses

Add Course

Edit Courses

Course Code	Course Name	Max students	Instructors	
C1	FDS	60	SGD	X
C2	OOP	60	DPG	X
C3	DELD	60	MMS	X
C4	CG	60	SFS	X
C5	DM	60	NF1	X
C6	SPM	60	MAP	X
C7	DBMS	60	SRN	X
C8	TOC	60	WW	X
C9	CNS	60	AJK	X
C10	SPOS	60	NF2	X
C11	DA	60	AMJ	X
C12	HPC	60	SVA	X
C13	DMW	60	DMU	X
C14	DS	60	NRT	X
C15	AIR	60	NR	X

INSERTING DEPARTMENT

Time-Table Scheduler
Schedule Timetable with ease

Home Instructor Room Meeting time Course Department Section

Add Department Edit Department

Department name:

Courses:

C1 FDS
C2 OOP
C3 DELD
C4 CG
C5 DM
C6 SPM

Time-Table Scheduler
Schedule Timetable with ease

Home Instructor Room Meeting time Course Department Section

Add Department Edit Department

Department	Courses	
SE_1_Comp	OOP, DELD, DM, FDS, CG	+
TE_1_Comp	CNS, SPM, TOC, SPOS, DBMS	+
BE_1_Comp	DA, HPC, AIR, DMW, DS	+

INSERTING SECTION

Time-Table Scheduler
Schedule Timetable with ease

[Home](#) [Instructor](#) [Room](#) [Meeting time](#) [Course](#) [Department](#) [Section](#) [+](#)

Add Section

Edit Section

Section id:

Department:

Total classes in a week:

SUBMIT

Time-Table Scheduler
Schedule Timetable with ease

[Home](#) [Instructor](#) [Room](#) [Meeting time](#) [Course](#) [Department](#) [Section](#) [+](#)

Add Section

Edit Section

Section Id	Department	Total Classes	
SE_1_Comp	SE_1_Comp	18	+
TE_1_Comp	TE_1_Comp	16	+
BE_1_Comp	BE_1_Comp	15	+

FINAL

Time-Table Scheduler
Schedule Timetable with ease

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[Course](#)
[Department](#)
[Section](#)

Timetable Generator

Let our Artificial Intelligence schedule your classes. Add your university class details and generate Time Table.

Generate Timetable

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Stop

Time-Table Scheduler

Schedule Timetable with ease

[Home](#)
[Instructor](#)
[Room](#)
[Meeting time](#)
[Course](#)
[Department](#)
[Section](#)

SE_1_Comp (SE_1_Comp)

Class #	8:45 - 9:45	10:00 - 11:00	11:00 - 12:00	1:00 - 2:00	2:15 - 3:15
Monday	FDS (SGD)	CG (SFS)		OOP (DPG)	DELD (MMS)
Tuesday	OOP (DPG)	CG (SFS)	DELD (MMS)		
Wednesday		FDS (SGD)	OOP (DPG)	DM (NFI)	
Thursday	DM (NFI)	DELD (MMS)	FDS (SGD)	CG (SFS)	
Friday	FDS (SGD)	OOP (DPG)	CG (SFS)	DM (NFI)	

TE_1_Comp (TE_1_Comp)

Class #	8:45 - 9:45	10:00 - 11:00	11:00 - 12:00	1:00 - 2:00	2:15 - 3:15
Monday	SPOS (NF2)	SPM (MAP)	DBMS (SRN)		
Tuesday		DBMS (SRN)	TOC (WW)	CNS (AJK)	SPM (MAP)
Wednesday	CNS (AJK)	DBMS (SRN)		TOC (WW)	
Thursday	SPOS (NF2)	CNS (AJK)		SPM (MAP)	
Friday		TOC (WW)	SPOS (NF2)	DBMS (SRN)	

BE_1_Comp (BE_1_Comp)

Class #	8:45 - 9:45	10:00 - 11:00	11:00 - 12:00	1:00 - 2:00	2:15 - 3:15
Monday	DA (AMJ)	DMW (DMU)	HPC (SVA)	AIR (NR)	DS (NRT)
Tuesday			DA (AMJ)		AIR (NR)
Wednesday		DS (NRT)	HPC (SVA)	DMW (DMU)	
Thursday			DMW (DMU)	DA (AMJ)	
Friday	HPC (SVA)	AIR (NR)		DS (NRT)	

CODE :-

<https://github.com/PROxZIMA/TimetableScheduler>

CONCLUSION

- IT IS COMPLICATED TASK THAT TO HANDLE MANY FACULTY'S AND ALLOCATING SUBJECTS FOR THEM AT A TIME PHYSICALLY. SO OUR PROPOSED SYSTEM WILL HELP TO OVERCOME THIS DISADVANTAGE. THUS WE CAN PRODUCE TIMETABLE FOR ANY NUMBER OF COURSES AND MULTIPLE SEMESTERS.
- THIS SYSTEM WILL HELP TO CREATE DYNAMIC PAGES SO THAT FOR IMPLEMENTING SUCH A SYSTEM WE CAN MAKE USE OF THE DIFFERENT TOOLS ARE WIDELY APPLICABLE AND FREE TO USE ALSO.