



**Daffodil**  
*International*  
**University**

## Project Documentation

Project: Routine Generator

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# Project Overview: Class Schedule Management System

The "Class Schedule Management System" is a C-based console application designed to automate the process of creating and managing class schedules for educational institutions. The system aims to simplify the tasks related to teacher subject allocation, batch-wise subject distribution, and generation of daily class routines.

The primary goal of the project is to streamline the scheduling process within an educational institution, offering the following key features:

Efficient allocation of teachers to subjects based on their availability and maximum class limits.

Distribution of subjects to batches and sections in an organized manner.

Generation of comprehensive class routines for different batches and sections.

User-friendly interface for administrators to interact with the system and make necessary adjustments.

## **Key Features:**

- *Header Files:*
  1. `#include <stdio.h>`
  2. `#include <stdlib.h>`
  3. `#include <string.h>`

- *Functions:*

1. `int fileCheck(FILE *file);`
2. `int rewrite(const char *subject, char *teacher);`
3. `int fileRegenaret();`
4. `int distribute(int loop);`
5. `int afterdistributeTeachers();`
6. `int BatchWiseSubRe();`
7. `int destrubuteTeachers();`
8. `int makeClasses();`
9. `int makeRoutine();`
10. `void appendFile(char *filename);`
11. `int find();`
12. `int FullRoutine();`

- *Files:*

1. `char TeacherSubjects[30] = "TeacherSubjects.txt";`
2. `char BatchWiseSub[30] = "BatchWiseSub.txt";`
3. `char SubjectDestribution[30] =`  
`"SubjectDestribution.txt";`
4. `char SubjectDestribution2[30] =`  
`"SubjectDestribution2.txt";`
5. `char Temp[30] = "Temp.txt";`
6. `char PreSchedule[30] = "PreSchedule.txt";`
7. `char Shedule[30] = "Shedule.txt";`

### **Conclusion:**

The "Class Schedule Management System" is a comprehensive tool for educational institutions to automate and optimize the scheduling process. By providing efficient subject and teacher allocation, the system contributes to the smooth operation of classes and ensures a well-organized educational environment.

# Obstacles

While crafting the project code, I encountered several challenges. The sheer scale of this project made it apparent that collaboration is essential, yet I chose to embrace this challenge independently. I aimed to streamline the system by employing clear and concise code. Among all the components, the creation mechanism for quizzes posed the greatest difficulty. To implement this section, I had to devise a method for generating random file names as addresses for each quiz file.

## Technology Requirement (Software and hardware)

- Visual Studio Code
- Code Blocks
- Dev-C++

## Support

Provide the full support for maintenance. Give proper support so that the project will run smoothly. And every time when ever you want to make routine, you will need to press “0” zero to refresh the files.

## Milestone and reporting

Milestone	Tasks	Hours	Date
1.	Analysis	240	8/8/2023
2.	Development		27/8/2023
3.	Testing		1/11/2023

➤ Analysis

➤ Development

➤ Testing

## Milestone and reporting

## Contact me

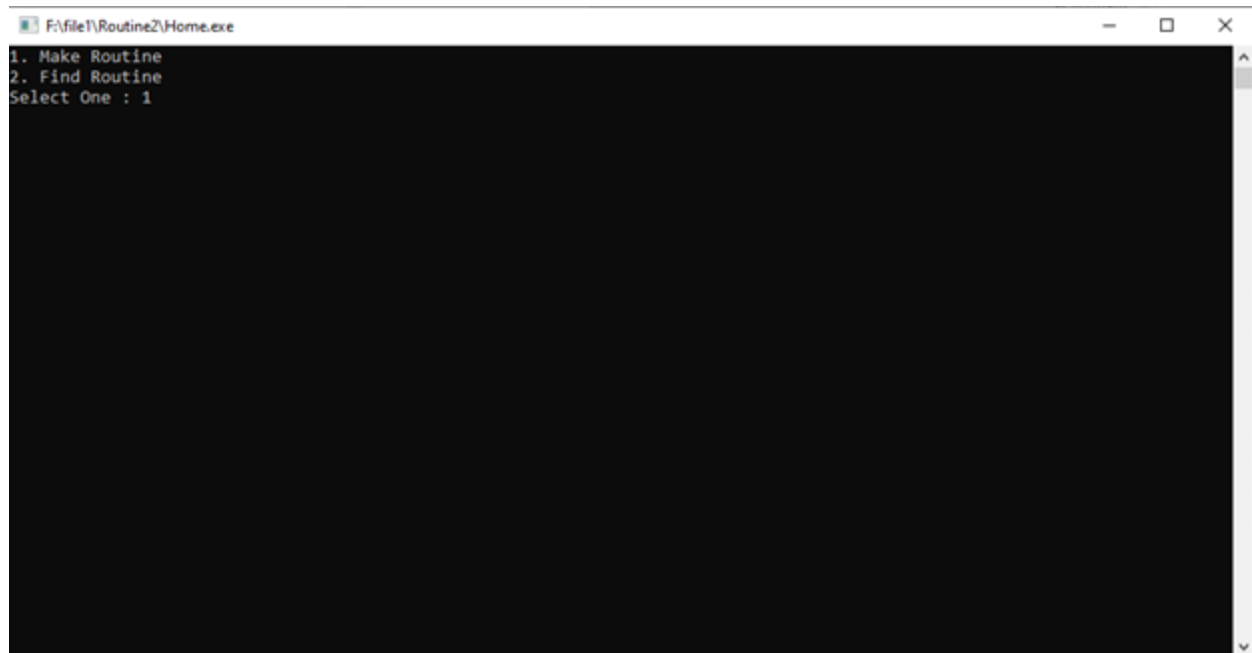
Email: omarfaruk122019@gmail.com

Mobile: +8801970608472

Facebook: <https://www.facebook.com/m.omarfaruksiam/>

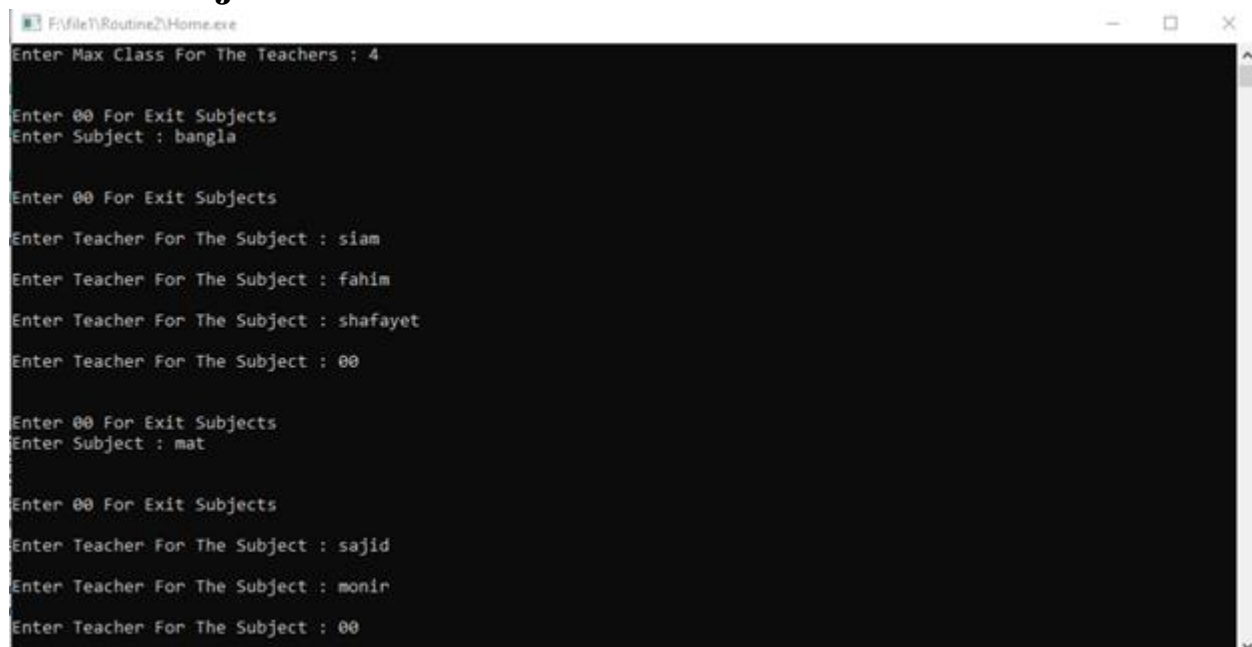
# PROJECT METHADOLGY AND USER MANUAL

Press “1” :



```
F:\file1\Routine2\Home.exe
1. Make Routine
2. Find Routine
Select One : 1
```

Enter Subjects information:



```
F:\file1\Routine2\Home.exe
Enter Max Class For The Teachers : 4
Enter 00 For Exit Subjects
Enter Subject : bangla
Enter 00 For Exit Subjects
Enter Teacher For The Subject : siam
Enter Teacher For The Subject : fahim
Enter Teacher For The Subject : shafayet
Enter Teacher For The Subject : 00
Enter 00 For Exit Subjects
Enter Subject : mat
Enter 00 For Exit Subjects
Enter Teacher For The Subject : sajid
Enter Teacher For The Subject : monir
Enter Teacher For The Subject : 00
```

## Enter Students Classes Information:

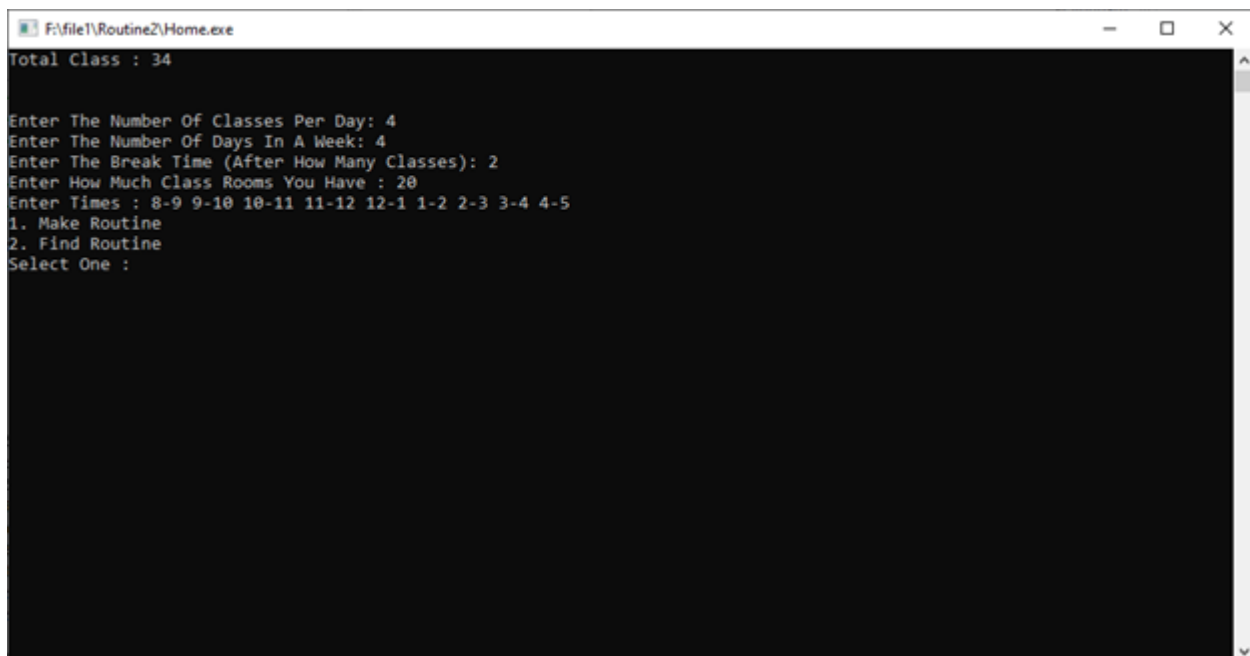


```
F:\file1\Routine2\Home.exe

Enter 00 For Exit Batch
Enter Batch Number : 39
Enter Section : a
Enter Section : b
Enter Section : c
Enter Section : d
Enter Section : e
Enter Section : f
Enter Section : g
Enter Section : 00
Enter Subject : bangla
Enter Subject : mat
Enter Subject : 00

Enter 00 For Exit Batch
Enter Batch Number : 40
Enter Section : a
Enter Section : b
Enter Section : c
Enter Section : 00
Enter Subject : bangla
Enter Subject : 00
```

## Enter Your Class times As Your Wish:



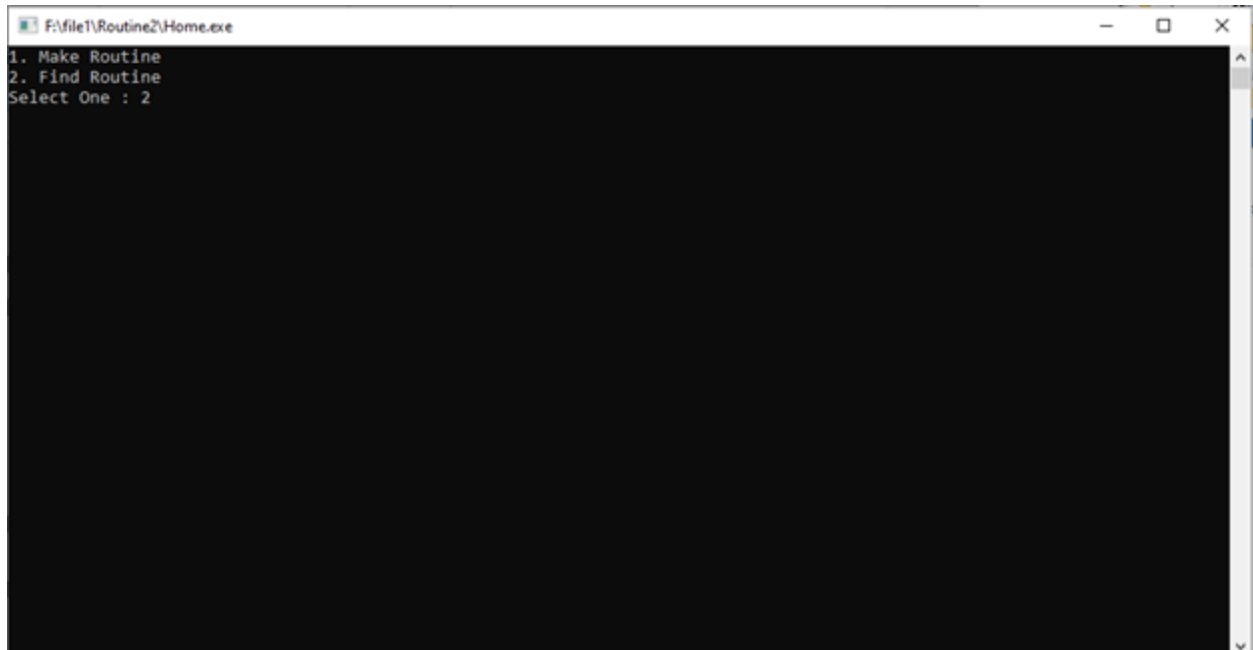
```
F:\file1\Routine2\Home.exe

Total Class : 34

Enter The Number Of Classes Per Day: 4
Enter The Number Of Days In A Week: 4
Enter The Break Time (After How Many Classes): 2
Enter How Much Class Rooms You Have : 20
Enter Times : 8-9 9-10 10-11 11-12 12-1 1-2 2-3 3-4 4-5
1. Make Routine
2. Find Routine
Select One :
```



**Now Press “2”:**



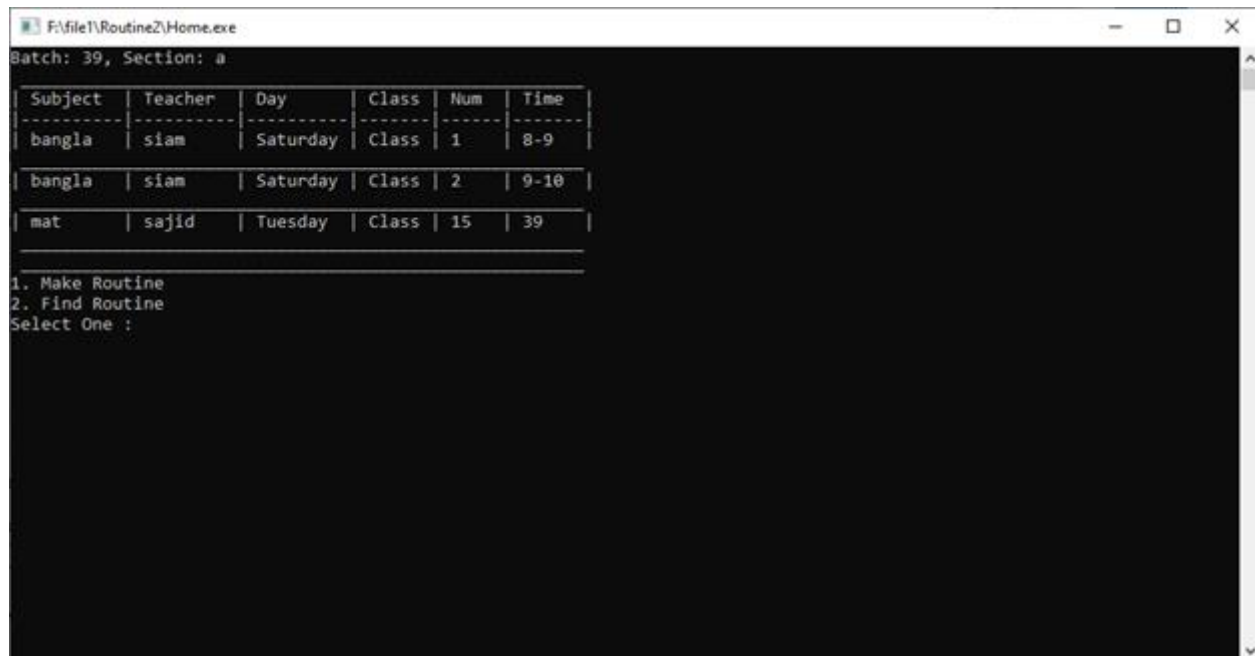
```
F:\file1\Routine2\Home.exe
1. Make Routine
2. Find Routine
Select One : 2
```

**Enter Your Batch And Section:**



```
F:\file1\Routine2\Home.exe
Enter Batch : 39
Enter Section :a
```

## See Your Routine:

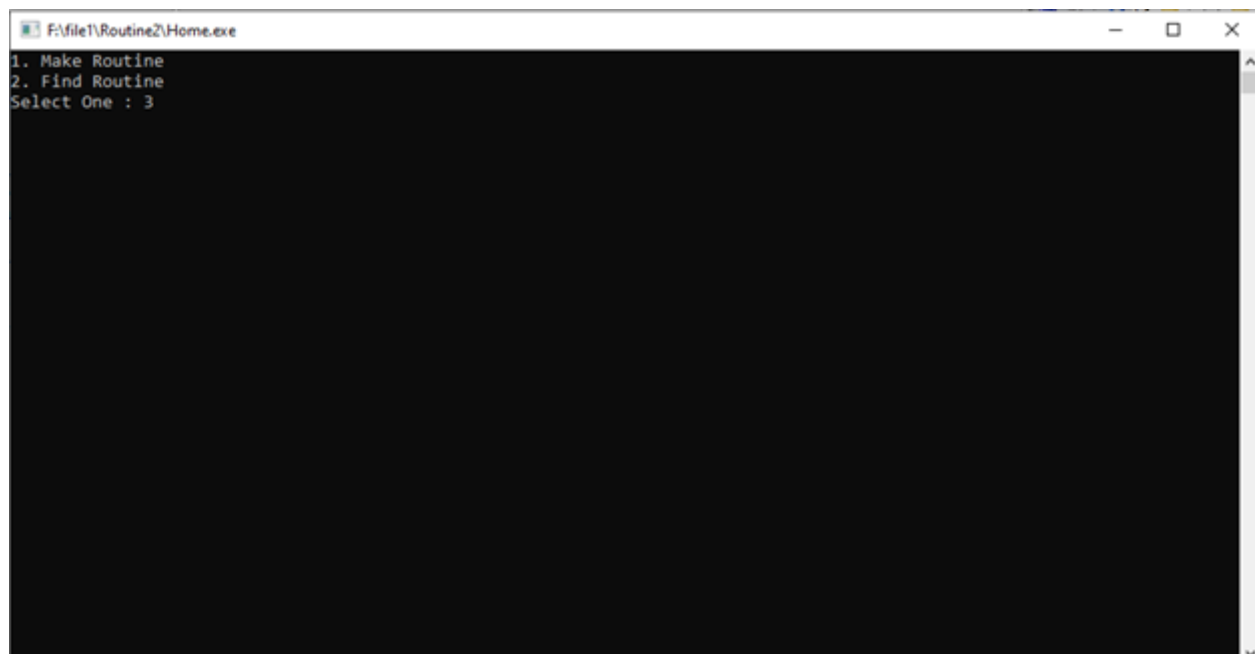


```
F:\file1\Routine2\Home.exe
Batch: 39, Section: a

| Subject | Teacher | Day   | Class | Num | Time |
|-----|-----|-----|-----|-----|-----|
| bangla  | siam    | Saturday | Class | 1   | 8-9   |
| bangla  | siam    | Saturday | Class | 2   | 9-10  |
| mat     | sajid   | Tuesday  | Class | 15  | 39    |

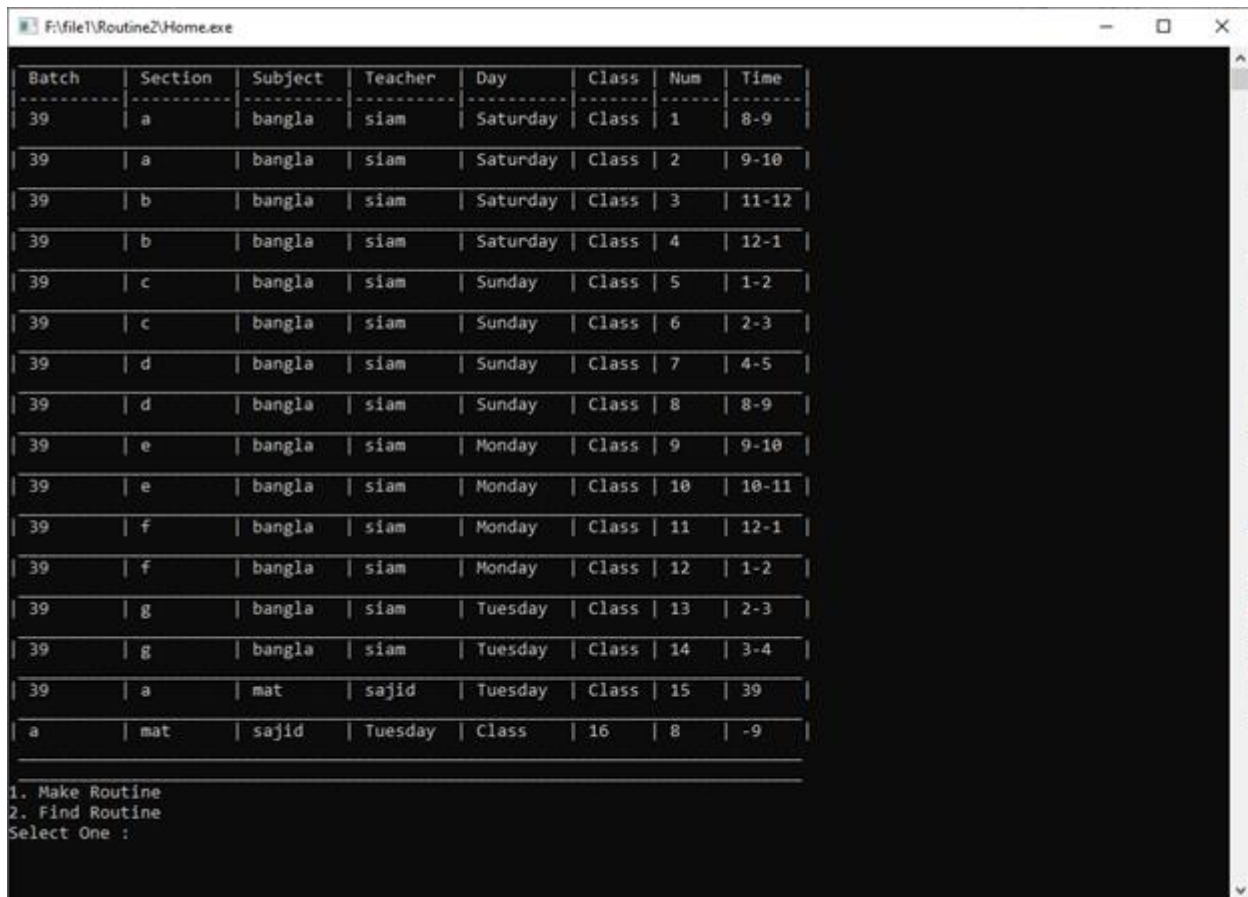
1. Make Routine
2. Find Routine
Select One :
```

## Press “3” To See The Full Routine:



```
F:\file1\Routine2\Home.exe
1. Make Routine
2. Find Routine
Select One : 3
```

## See Routine For All Sections:



Batch	Section	Subject	Teacher	Day	Class	Num	Time
39	a	bangla	siam	Saturday	Class	1	8-9
39	a	bangla	siam	Saturday	Class	2	9-10
39	b	bangla	siam	Saturday	Class	3	11-12
39	b	bangla	siam	Saturday	Class	4	12-1
39	c	bangla	siam	Sunday	Class	5	1-2
39	c	bangla	siam	Sunday	Class	6	2-3
39	d	bangla	siam	Sunday	Class	7	4-5
39	d	bangla	siam	Sunday	Class	8	8-9
39	e	bangla	siam	Monday	Class	9	9-10
39	e	bangla	siam	Monday	Class	10	10-11
39	f	bangla	siam	Monday	Class	11	12-1
39	f	bangla	siam	Monday	Class	12	1-2
39	g	bangla	siam	Tuesday	Class	13	2-3
39	g	bangla	siam	Tuesday	Class	14	3-4
39	a	mat	sajid	Tuesday	Class	15	39
a	mat	sajid	Tuesday	Class	16	8	-9

1. Make Routine  
2. Find Routine  
Select One :

**Notes:** If you press “0” then the data will be deleted. That means you will be not able to get the information again. And if you want to make another routine than save the “schedule.txt” file with another name. Than make a new routine.

## PRIORITIZATION:

Sl.No	Requirement	Dollar
1	Add Subject	5\$
2	Add Teacher	10\$
3	Add Batch	5\$
4	Add Section	5\$
5	Add Class Per Day	15\$
6	Add Classer Per Week	15\$
7	Break Time	5\$
8	Class Times	10\$
9	Find Routine	20\$
10	Find Full Routine	10\$
	<b>Total</b>	<b>100\$</b>

# USE CASE:

<b>Use case</b>	Add Subject
<b>Goal</b>	To add make the routine
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Subject Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Add Section
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Section Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Add Class Per Day
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Add Class Per Week
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Break Time
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A

<b>Success End Condition</b>	Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Class Times
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Find Routine
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Log in successfully, access the log in portal
<b>Failed End Condition</b>	Error

<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action

<b>Use case</b>	Find Full Routine
<b>Goal</b>	To make routine.
<b>Preconditions</b>	N\A
<b>Success End Condition</b>	Added
<b>Failed End Condition</b>	Error
<b>Primary Actors;</b>	Teacher, Student
<b>Secondary Actors</b>	Admin
<b>Description / Main Success Scenario</b>	Action



## Use Case Diagram:

