



**TKM**  
**Institute of Technology**



*(Approved by AICTE, New Delhi & affiliated to Kerala Technological University)*  
Musaliar Hills, Karuvelil P.O., Ezhukone, Kollam - 691505, Kerala, India  
Phone : +91 474 2482833, +91 474 2482083 Fax : +91 474 2483715  
E-mail : principal@tkmit.ac.in Website : www.tkmit.ac.in

# **Report on Innovative Teaching Practices: Flipped Classroom for Programming in C**

**Academic Year:** 2023 – 2024

**Semester/Branch:** S2 BME

**Subject:** EST102 Programming in C

**Faculty:** Mrs. Chinnu Ravi

**Innovative Teaching Method:** Flipped classroom

**Topic/Question:** Implement the factorial of a number using while and do-while loop.

## **Introduction**

The purpose of this report is to highlight the implementation of innovative teaching practices in the Programming in C course, specifically focusing on the use of a flipped classroom approach for Module 2. The flipped classroom model is designed to enhance student engagement, foster deeper understanding, and promote active participation in the learning process.

## **Flipped Classroom Approach**

### **Overview**

In Module 2, titled Control Flow Statement, a flipped classroom methodology was employed to deliver instructional content. This approach involved the reversal of traditional teaching methods, with students accessing pre-recorded lectures, reading materials, and multimedia resources before class sessions. Classroom time was then dedicated to discussions, collaborative activities, and application exercises.

### **Rationale**

The flipped classroom model was chosen to:

- Promote self-directed learning and student responsibility.
- Utilize valuable class time for interactive and applied learning activities.

- Enhance engagement and understanding of concepts related to disaster management.

## Material Sharing

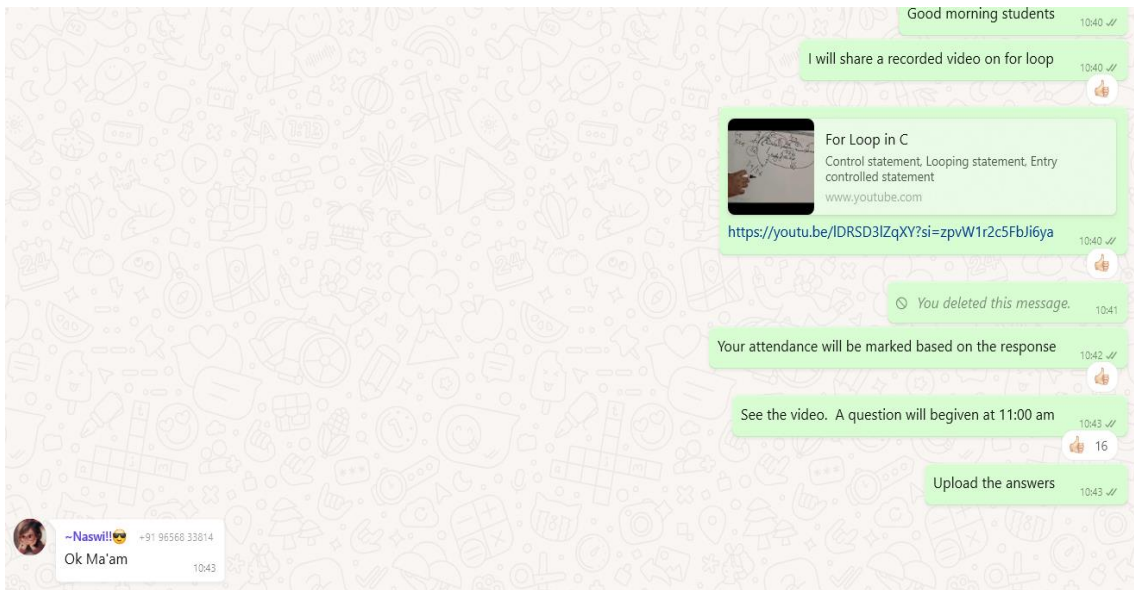
To ensure effective material sharing, an online platform was used for hosting reading materials, and supplementary resources.

## Student Response

An application exercise based on the looping concept was given through the LMS etlab. The students implemented the given application exercise and uploaded the programs. The programs were evaluated and the feedback was given through the LMS.

## Proof

A screenshot of the material shared through Whatsapp and the proof of uploaded materials and its feedback is provided below.



LOOPING STATEMENTS					Publish Marks to Students	Edit	Export Homework Data
Batch		BM 2023		Type Text			SUBMIT BY UPLOAD
Issued On		Mon, 18th March 2024		Description			Program on factorial. Write it in your note book and write your name and roll number on the top of the page and upload.
Last Date		Mon, 18th March 2024		File Name			1) 19_26_303_17107392870_HOME_WORK_1.docx - Download
Late Submission Allowed		Late submission not allowed		Status			Results not published
Submitted Students		Students Submitted After Last Date		Students Not Submitted			Total 33 results
Roll No	Name	Submitted on	Uploaded File	Teacher Feedback			
3	ABHIRAMI S S	Mon, 18th March 2024	Download	Add semicolon at the end of while ii			

Abhisami S.S  
? Write a program on ~~factor~~ factorial

```
#include <stdio.h>  
void main()
```

```
{ int f = 1, n, i;
```

```
printf ("Enter any no "/n);
```

```
scanf (" %d", &n);
```

```
for (i = 1, i <= n; i++)
```

```
{ f = f * i;
```

```
}
```

```
printf ("factorial is %d", f);
```

```
}
```

factorial number

while

```
#include <stdio.h>
```

```
void main()
```

```
{ int n, f = 1, i;
```

```

i = 1;
printf("enter a number \n");
scanf("%d", &n);
while (i <= n)
{
    f = f * i;
    i = i + 1;
}
printf("factorial is %d", f);
}

```

```

do while
#include <stdio.h>
void main()
{
    int n, f = 1, i;
    i = 1;
    printf("enter the number \n");
    scanf("%d", &n);
    do

```

## Conclusion

Implementing a flipped classroom model to teach looping concepts in programming, where students are provided with pre-class instructional videos and are asked to write a program on calculating

factorials using `while` and `do while` loops, can significantly enhance the learning experience by enabling them to dive deeper into practical applications and problem-solving during the class.