

**Dr. D. Y. Patil Unitech Society's**  
**Dr. D. Y. Patil Arts, Commerce & Science College Pimpri, Pune-18**  
**Department of Computer Science**  
**2024-2025**

**Credit Activity II**  
**Notice and Time Table**

**Class:- BCA(Science) Semester-VI**

**Activity:-Mini Project using Go Programming**

**Subject:- BCA 362: DSE-V Programming in Go**

**Date:10/02/2025**

It is hereby informed to all TYBCA(Science) Sem-VI students that develop a Credit Activity on "**Mini Project using Go Programming**". This project will enhance your practical knowledge and understanding of programming constructs, concurrency, and API development in Go. Students can develop the mini project from the project ideas assigned to them and present their work as per the schedule provided.

**Project Guidelines:**

- The project must be developed individually or in teams (max 2 members).
- Use Go Programming Language for implementation.
- Submit the project along with a code documentation.
- The evaluation will be based on functionality, coding standards, and innovation.

**Submission Schedule:**

Sr. No.	Date	Time	Roll Number	Project Number
1	20/02/2025	01.00p.m. To 02.00p.m.	01 To 20	P01
			21 To 40	P02
2	21/02/2025	10.00a.m. To 11.00a.m.	41 To 60	P03
			61 To 80	P04
3	22/02/2025	11.00a.m. To 12.00p.m.	81 To 100	P05
			101 To 120	P06
4	24/02/2025	01.00p.m. To 02.00p.m.	121 To 140	P07
			141 To 160	P08
5	25/02/2025	01.00p.m. To 02.00p.m.	161 To 183	P09

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**Credit Activity II : Project Topics**

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**Activity:-Mini Project using Go Programming**

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It is hereby informed to all TYBCA(Science) Sem-VI students are hereby informed that the following are the assigned mini-projects along with their respective details, including project number, title, concepts to be used, features to develop, and expected outcomes.

Instructions:

1. Check your assigned project number carefully.
2. Read and understand the concepts that you need to apply.
3. Develop the specified features as mentioned in the project details.
4. Ensure that your project aligns with the given guidelines and fulfils the expected outcomes.
5. Complete your project within the stipulated timeline and be prepared for evaluation.

<b>Project Number</b>	<b>Project Title</b>	<b>Concepts used in Project</b>	<b>Features needs to be Implement</b>	<b>Outcome of the Activity</b>
P01	Student Management System	- Functions, Methods, Interfaces - File Handling (CSV/JSON) - Concurrency using Goroutines	- Add, delete, update student records - Search student details using ID - Store data in CSV file	<ul style="list-style-type: none"><li>• Understanding of Go's data structures and file handling</li><li>• Hands-on experience with functions and methods</li></ul>
P02	Online Examination System	- Functions & Structs - Goroutines & Channels - File Handling	- User registration and login - Randomized question paper generation - Timer functionality (using Goroutines)	<ul style="list-style-type: none"><li>• Learn how to build a real-time system using concurrency</li><li>• Practical implementation of methods and file handling</li></ul>
P03	Simple E-Commerce Backend	- Go Packages - Interfaces & Methods - API Development (using net/http)	- Product listing and cart system - User authentication - Order processing	<ul style="list-style-type: none"><li>• Learn how to create APIs and handle HTTP requests in Go</li><li>• Use Go's package system for modularity</li></ul>

P04	Multithreaded Chat Application	<ul style="list-style-type: none"> <li>- Goroutines &amp; Channels</li> <li>- TCP Networking (net package)</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple users can send/receive messages</li> <li>- Uses channels for real-time message passing</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding of networking and concurrency in Go</li> <li>• Practical implementation of Goroutines</li> </ul>
P05	File Compression Tool	<ul style="list-style-type: none"> <li>- File Handling</li> <li>- Goroutines for parallel compression</li> </ul>	<ul style="list-style-type: none"> <li>- Compress files using Gzip</li> <li>- Handle multiple files concurrently</li> </ul>	<ul style="list-style-type: none"> <li>• Learn how to work with files and concurrency in Go</li> </ul>
P06	Task Scheduler (Cron Job Simulation)	<ul style="list-style-type: none"> <li>- Goroutines, Timers &amp; Tickers</li> <li>- File Handling</li> </ul>	<ul style="list-style-type: none"> <li>- Schedule tasks to run at specific intervals</li> <li>- Logs execution details to a file</li> </ul>	<ul style="list-style-type: none"> <li>• Learn how to automate tasks in Go</li> </ul>
P07	Mini Banking System	<ul style="list-style-type: none"> <li>- Functions, Methods, Interfaces</li> <li>- Goroutines &amp; Channels</li> <li>- Go Packages</li> </ul>	<ul style="list-style-type: none"> <li>- Account creation &amp; management</li> <li>- Deposit and withdrawal operations</li> <li>- Concurrent transactions handling</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding of Go's core features like functions, interfaces, and concurrency</li> <li>• Practical exposure to Go routines and channels</li> </ul>
P08	Multithreaded Chat Application	<ul style="list-style-type: none"> <li>- Concurrency &amp; Parallelism</li> <li>- Goroutines &amp; Channels</li> </ul>	<ul style="list-style-type: none"> <li>- Multiple users can send/receive messages concurrently</li> <li>- Uses channels for message passing</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding concurrent programming in Go</li> <li>• Applying Go routines &amp; channels in real-world scenarios</li> </ul>
P09	Create a Custom Logging Package	<ul style="list-style-type: none"> <li>- Go Packages</li> <li>- File Handling</li> </ul>	<ul style="list-style-type: none"> <li>- Write logs to a file</li> <li>- Support different log levels (INFO, WARNING, ERROR)</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding Go Packages and modular programming</li> <li>• Hands-on experience with file handling and logging</li> </ul>