Guru Nanak Dev Engineering College, Ludhiana

Department of Computer Science & Engineering

Ref. No.: CSE/ 38/1576   Date: 30.06.2024

NOTICE

The department of CSE is offering 4 weeks Training (TR-101), in hybrid mode as divided in two modules, module I (offline, in CSE Department) and module II (online, self paced learning mode through Infosys spring board platform) details of the training as follows:

S. N	Name of Course	Mode	Dates	Evaluation	
				60 Marks (Internal)	**40 Marks (External)**
1.	Function Oriented Approach for Problem Solving	Offline *(in CSE department)*	05.06.2024 to 20.06.2024	**Total 30 Marks:** *10 Marks (Test) + 20 Marks (Continues Internal Evaluation to be done by Instructors)*	
2.	*Python	Online *(Self paced learning mode through Infosys spring board platform)*	*21.06.2024 to 05.07.2024 Student will submit the certificate after passing the proctored exam conducted by Infosys spring board till MSE-I of next academic session.*	**Total 20 Marks:** *20 Marks (Proctored Infosys certificate exam)*	**External Viva Voce = 40 Marks**
3.	Training Report			**Total 10 Marks**	

Details: *Python

Sl. No.	Technology	Certification Name	Certification Link	Pre-Requisite Learning Course Name	Pre-Requisite Learning Course Link	Recommended Learning Duration (In hours)
1	Python	Python Foundation Certificate (Objective)	https://infyspringboard.onwingspan.com/web/en/app/toc/lex_auth_013578477397319680386 2_shared/overview	Programming Fundamentals using Python - Part 1	https://infyspringboard.onwingspan.com/web/en/app/toc/lex_auth_0125409616 243425281061_shared/overview	44
				Programming Fundamentals using Python - Part 2	https://infyspringboard.onwingspan.com/web/en/app/toc/lex_auth_0127340036 00908288382_shared/overview	41

Tanning Coordinator   **HOD (CSE)**

Syllabus for offline module for 4 weeks Training (TR-101):

(Function Oriented Approach for Problem Solving)

Course Description:

This intensive 2-week course is designed for students with a basic knowledge of C programming who wish to deepen their understanding of function-oriented problem solving. The course emphasizes the importance of modularity and reusability in programming, focusing on function design, implementation, and optimization. Students will learn advanced function concepts, including recursion and pointers, and will explore various problem-solving strategies through hands-on exercises

Course Objectives:

- Deepen understanding of function-oriented programming.
- Develop skills in modular and reusable code design.
- Enhance problem-solving techniques using C.
- Apply knowledge to real-world coding challenges.

S. No.	Day	Dates	Concept	Contents
1.	Day1	05.06.2024	**Functions in C**	• Function declaration and definition.
2.	Day2	06.06.2024		• Function parameters and return values.
				• Scope of variables: local vs global.
3.	Day3	07.06.2024	**Recursion**	• Recursion and recursive functions.
4.	Day4	11.06.2024	**Arrays and Strings**	• One-dimensional and multi-dimensional arrays.
5.	Day5	12.06.2024		• String handling functions.
				• Passing arrays and strings to functions.
6.	Day6	13.06.2024	**Pointers**	• Basics of pointers.
7.	Day7	14.06.2024		• Pointer arithmetic.
				• Pointers and arrays.
				• Pointers to functions.
				• Call by value vs Call by reference
8.	Day8	18.06.2024	**Structures**	• Defining and using structures
9.	Day9	19.06.2024		• Nested structures.
				• Arrays of structures.
10.	Day10	20.06.2024	***Project Work**	**Overview:** The ATM simulator project aims to simulate the functionalities of a real ATM machine. Users can perform various banking operations such as withdrawing cash, depositing cash, checking balance, and transferring funds between accounts. The project will utilize concepts such as functions, arrays, conditional statements, and loops to create a functional

				simulation.

Details: * Project Work (ATM Simulator Project)

Overview: The ATM simulator project aims to simulate the functionalities of a real ATM machine. Users can perform various banking operations such as withdrawing cash, depositing cash, checking balance, and transferring funds between accounts. The project will utilize concepts such as functions, arrays, conditional statements, and loops to create a functional simulation.

Features:

1. **User Authentication**: Users will need to authenticate themselves using a PIN before accessing any banking features.
2. **Balance Inquiry**: Users can check their account balance.
3. **Cash Withdrawal**: Users can withdraw cash from their account.
4. **Cash Deposit**: Users can deposit cash into their account.
5. **Transfer Funds**: Users can transfer funds between accounts (if supported).
6. **Change PIN**: Users can change their PIN for security purposes.
7. **View Transaction History**: Users can view their transaction history.

Implementation:

1. **User Authentication:**
o   Prompt the user to enter their PIN.
o   Compare the entered PIN with the stored PIN for authentication.
2. **Balance Inquiry:**
o   Retrieve and display the user's account balance.
3. **Cash Withdrawal:**
o   Prompt the user to enter the amount they want to withdraw.
o   Check if the withdrawal amount is within the account balance.
o   Deduct the withdrawn amount from the account balance.
4. **Cash Deposit:**
o   Prompt the user to enter the amount they want to deposit.
o   Add the deposited amount to the account balance.
5. **Transfer Funds:**
o   Prompt the user to enter the recipient's account number and the amount to transfer.
o   Check if the transfer amount is within the account balance.
o   Deduct the transferred amount from the sender's account balance and add it to the recipient's account balance.
6. **Change PIN:**
o   Prompt the user to enter their current PIN and then the new PIN.
o   Update the stored PIN with the new PIN.
7. **View Transaction History:**
o   Maintain a transaction history log for each user.
o   Allow users to view their recent transactions.

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Time Table for offline module for 4 weeks Training (TR-101):

Module I, offline in CSE Department				
Group	Time	Venue	Dates	Teacher
G1	9:00 AM-12:00 NOON	SL-I	05.06.2024 to 20.06.2024	Kuljit Kaur (KK) Shailja (SH)
G2	9:00 AM -12:00 NOON	SL-II	05.06.2024 to 20.06.2024	Diana Nagpal (DN) Manpreet kaur Mand (MKM)
G3	9:00 AM -12:00 NOON	R-Lab	05.06.2024 to 20.06.2024	Vivek Thapar (VT) Harminder Kaur (HMK)
G4	9:00 AM -12:00 NOON	PL-Lab	05.06.2024 to 20.06.2024	Kamaldeep Kaur (KD) Jasdeep Kaur (JSK)
G5	1:00 PM-4:00 PM	PL-Lab	05.06.2024 to 20.06.2024	Amandeep Kaur Sohal (AKS) Manjot Kaur Gill (MKG)
G6	1:00 PM-4:00 PM	R-Lab	05.06.2024 to 20.06.2024	Goldendeep Kaur (GLK) Priyanka Arora (PA)
G7	1:00 PM-4:00 PM	SL-I	05.06.2024 to 20.06.2024	Amit Jain (AJ) Kapil Sharma (KPS) *Harkomalpreet Kaur (HK)
G8	1:00 PM-4:00 PM	SL-II	05.06.2024 to 20.06.2024	Hardeep Singh Kang (HSK) Priti Aggarwal (PRA)
G1,G2,G3,G4	1:00 PM-4:00 PM	Assignments	05.06.2024 to 20.06.2024	--
G5,G6,G7,G8	9:00 AM -12:00 NOON	Assignments	05.06.2024 to 20.06.2024	--

Training Coordinator   **HOD (CSE)**