

JK Lakshmipat University, Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, November 2024

BCA, Semester V

Roll No.....

CS1240: Project Based Advanced Programming

Time: 2 hour

Max. Marks: 20

Instructions to students:

1. Assume suitable data wherever required and mention it clearly.
2. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

	Marks
1. Build an UiPath workflow to process invoices stored in a folder. The workflow should iterate through each file and log the file name to the console.	4
• What type of variable would you use to store the list of file names? • Write the pseudocode or describe the steps needed to iterate through the files and log their names.	LO-5 LO-6
2. You are tasked with automating the following process:	4
1. Read an Excel file containing employee details (Name, Email, and Joining Date). 2. Filter employees who joined after a specific date (e.g., January 1, 2022). 3. Send a personalized email to these employees using Outlook.	LO-4 LO-5 LO-8
Describe the steps required to build this workflow in UiPath. Mention the key activities you would use and how you would handle errors during execution.	
3. Your organization has several robots processing customer invoices. Management is complaining that the automation process is taking too long and consuming excessive system resources.	4
• List 5 optimization techniques to improve the performance of UiPath workflows. • Explain how each technique would help reduce execution time or system resource usage.	LO-4 LO-6 LO-7
4. Given an array of integers where every number appears exactly twice , except for one number that appears only once. Write a pseudocode to find the unique number in the array in O(n) time and O(1) space.	4
• Example Input: [4, 3, 2, 4, 1, 3, 2] • Output: 1	LO-1 LO-3
5. Given an unsorted array , determine if it is possible to partition it into two subarrays such that the sums of both subarrays are equal. Write the function returning Boolean.	4
Example	LO-1 LO-2
• Input: arr = [1, 2, 3, 4, 5, 5] • Output: True • Explanation: The array can be partitioned as [1, 2, 3, 4] and [5, 5] with equal sums of 10.	