Seminar Topic Summary Report

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Institution Name: Basaveshwar Engineering College, Bagalkot

Department of Computer Applications (MCA)

Course   : MCA

Semester   : II

Seminar Topic : ROBOTIC PROCESS AUTOMATION

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1. Introduction:

In today's rapidly evolving digital era, automation is a key driver for business

efficiency. Robotic Process Automation (RPA) is a cutting-edge technology that allows organizations to automate routine, rule-based tasks using software bots. These bots simulate human interactions with digital systems to complete tasks such as data entry, form submission, and report generation. The seminar aims to explore how RPA is revolutionizing industries and why understanding this technology is crucial for our curriculum aspiring to become skilled IT professionals.

2. Seminar Topic Details:

- Title of the Topic: Robotic Process Automation (RPA)

- Area/Domain: Artificial Intelligence, Software Engineering, Process Automation

- Keywords: Automation, Software Bots, Workflow Optimization

3. Topic Summary

Robotic Process Automation (RPA) is a technology used to automate structured, repetitive tasks that are usually performed by humans. RPA tools allow the creation of bots that can real user actions like logging into systems, copying and pasting data, and generating reports. This technology is transforming industries such as finance, healthcare, HR, and IT by increasing accuracy and reducing cost. Unlike traditional

automation, RPA does not require deep programming knowledge, making it accessible for business process owners. The seminar will explore the architecture of RPA, key tools like UiPath and Automation Anywhere, real-world applications, and how RPA integrates with AI and machine learning for intelligent automation. This topic is timely and important for future developers and analysts in our field.

4. Relevance to MCA Curriculum :

RPA is closely related to core Curriculum subjects like Software Engineering, Artificial Intelligence, Database Management Systems, and System Design. Understanding RPA equips as students with the skills to

design intelligent workflows and contribute to enterprise digital transformation projects. It also builds foundational knowledge applicable to emerging fields like AI, ML, and Business Process Management (BPM). Integrating RPA into the curriculum ensures for us as students are prepared for careers in automation, IT consulting, and software development.

5. Learning Objectives :

- **Understand the concept and evolution of RPA :**

  RPA started as simple macros and screen-scraping tools but evolved into intelligent software that mimics human actions across digital systems.

- **Identify areas where RPA can be applied:** RPA is ideal for repetitive, rule-based, high-volume tasks.

- **Learn about popular RPA tools and their use cases:** Tools like UiPath, Blue Prism, and Automation Anywhere simplify bot development with visual design platforms.

- **Understand RPA architecture and bot creation:** You'll explore components like Bot Creator (Studio), Bot Runner, and Orchestrator.

- **Explore future trends in intelligent automation:** RPA is moving toward Intelligent Automation with AI, OCR, and NLP integration

6. Expected Outcome :

We will gain a practical understanding of how RPA is applied in real-world scenarios. They will be able to recognize the benefits of automating business processes and understand how to design, build, and manage bots using leading RPA platforms. These skills are valuable for both academic research and professional roles in software automation, development, and IT operations.

7. References :

1. Leslie Willcocks & Mary Lacity, Robotic Process Automation and Risk Mitigation, Springer, 2018

2. Alok Mani Tripathi, Learning Robotic Process Automation, Packt Publishing, 2017

3. UiPath Academy: academy.uipath.com

4. Automation Anywhere Docs: docs.automationanywhere.com

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