ROBOTIC PROCESS AUTOMATION (RPA)

Course Presentation
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Elective Course, 2022-2023, Fall Semester

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Acknowledgements

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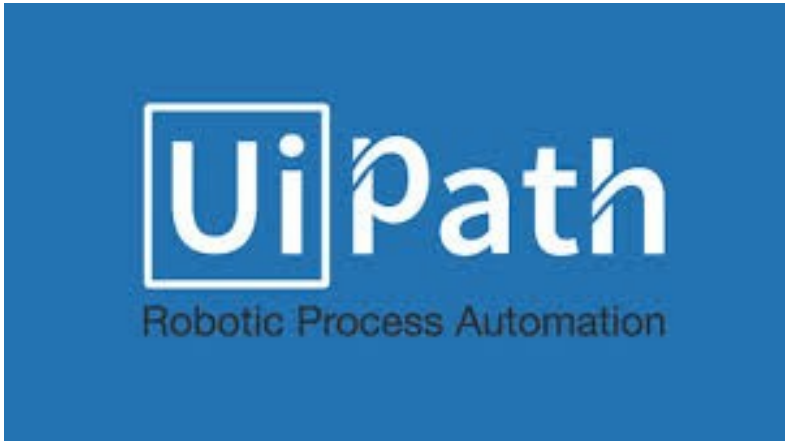

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Course Goals

- this course introduces
  - basic concepts on business processes;
  - technical knowledge **to develop software robots**;
  - business analyst related tasks;
- facilitates practical work on:
  - specific process automation tool – **UiPath Studio**;
  - **particular business process automation**.
- various **skills improvement** related to
  - team communication and team working;
  - innovative technology use.

Main intent: improve technical skills to develop software robots.

Final Grade

- **Final Grade (G) = 30%L + 70%P**

- RPA Grade Calculator link

Activities. Details

- **Lecture: 2 hours/week; 14 weeks;**
- **Laboratory: 2 hours every 2 weeks;**
- **Project: turn in during week 14.**

Activity Planning (1)

Week	Lecture	Laboratory
[w01]	**Lecture 01.** Course Presentation	----------
[w02]	**Lecture 02.** Course Presentation Robotic Process Automation (RPA). UiPath Platform. Introduction to UiPath Studio (Project Overview. Basic Data Types. Control Flow)	**Lab 01.** UiPath Studio installation. RPA project setup. Basic Concepts
[w03]	**Lecture 03.** **UiPath: UiPath Platform Presentation** **Software companies: Project Ideas Presentation**	
[w04]	**Lecture 04.** Data processing. Collections (Operations on Data. Data Manipulation)	**Lab 02.** Multiple workflows. Arguments. Invoke Workflow Activity
[w05]	**Lecture 05.** Advanced UI Interaction **RPA Diploma Paper Preparation Program**	

Activity Planning (2)

Week	Lecture	Laboratory
[w06]	**Lecture 06.** Debugging and Exception Handling (try-catch) Custom Activities	**Lab 03.** UI interactions. Exception Handling. Custom activities
[w07]	**Lecture 07.** Selectors	
[w08]	**Lecture 08.** Robotic Enterprise Framework (REF)	**Lab 04.** Selectors. Image and Text Automation
[w09]	**Lecture 09.** Image and Text Automation	
[w10]	**Lecture 10.** Excel. Data Tables	**Lab 05.** Excel *or* PDF files
[w11]	**Lecture 11.** PDF and E-mail	

Activity Planning (3)

Week	Lecture	Laboratory
[w12]	**Lecture 12.** Orchestrator. Basics Features (I) Orchestrator. Jobs Scheduler. Queues (II)	**Lab 06.** E-mail Automation *or* Orchestrator
[w--]	**Christmas Break**	
[w13]	**Lecture 13.** RPA Security Related Topics. Security Challenges. Robot Security. Orchestrator Security	**Lab 06.** E-mail Automation *or* Orchestrator
[w14]	**Lecture 14.** **RPA Project turn in**	**Lab 07.** **RPA Project turn in**

Lab. Rules

G = 30%L + 70%P

- **Attendances:**
  - **Lab attendances are not compulsory.**
  - Lab attendances will not be checked during lab activities by the teacher.
  - **Students should keep their lab group throughout the semester.**
- **Assignments:**
  - **Assignments are not mandatory;** students can pass the final course exam with the P grade only, i.e., L=0.
- **Organization:**
  - Students have the choice to work as single or in pairs (of two) to perform lab tasks.
  - Pairs can be changed from one lab assignment to another.
  - **The assignment is delivered if the whole pair attends the lab activity and turns in the assignment.**

Lab. Assignment Turn in Scheduler

Lab assigned	Week/Lab	Lab01	Lab02	Lab03	Lab04	Lab05	Lab06
	week01	-	-	-	-	-	-
Lab01	week02	-	-	-	-	-	-
	week03	-	-	-	-	-	-
Lab02	week04	10	-	-	-	-	-
	week05		-	-	-	-	-
Lab03	week06	8	10	-	-	-	-
	week07			-	-	-	-
Lab04	week08	-	8	10	-	-	-
	week09	-			-	-	-
Lab05	week10	-	-	8	10	-	-
	week11	-	-			-	-
Lab06	week12	-	-	-	8	10	10 (in class)
	week13	-	-	-			
	week14	X	X	X	X	X	X

G = 30%L + 70%P

- **L = Average of the highest 3 labs grades (or less than 3 lab assignments)**
  - **3 out of 6 lab assignments should be turned in in order to compute (successfully) grade L.**
  - students may choose **any** 3 lab assignments to be turned to compute L.
  - **all assignments have the same weight when computing the grade L.**
- **Lab activity (L) = 30% of the final grade (G).**

Project. Rules

G = 30%L + 70%P

- **P = Business Process Automation Project**
  - **P represents the RPA course final assessment;**
  - P is an individual student or a team (2-3 students) project;
  - Any student enrolled in RPA elective course can register to elaborate and turn in P.
  - Additional announcements on registering a team to P will be provided over MS Teams.
  - Details on the P **requirements** and **assessment** will be available on MS Teams.
  - **The registration deadline is the end of week 05.**
  - **P is turned in during week 14 according to a scheduling that will be available by the end of week 11.**

- **Project (P) = 70% of the final grade (G).**

UiPath Presentation. Project Ideas

- **week03:**
  - **UiPath presentation on UiPath Platform;**
  - **Project ideas from software companies collaborators:**
    - **FutureWorkForce**
    - **Fortech**
    - **Accesa**
    - **Automatify**
    - **UiPath**
    - **Goodroid**
    - **TquilaAutomation**

Resources (1)

- **MS Teams**
  - student are added to **RPA2022** team by the teacher after filling in a form with their details;
- communication over channels:
  - ***General***
    - events, announcements, news;
  - ***Lectures***
    - course presentation, lecture notes, demos;
    - references;
  - ***Lab_GT, Lab_DB***
    - specific details during particular lab activities;
  - ***RPA Project***
    - business process automation project details;
    - team details and project registration;
  - ***Q_A***
    - RPA related question, technical issues.

Resources (2)

- UiPath – Academic Alliance Edition (AAE)
  - https://www.uipath.com/landing/academic-studio-download
  - to install **UiPath Studio for AAE - framework for process automation development** before or during **Lab01** or **Lab02**;
  - renewable license;
- UiPath Docs
  - https://docs.uipath.com/studio/docs
- UiPath Forum
  - https://forum.uipath.com/
- UiPath Academy
  - https://academy.uipath.com/
  - create an account;
  - enroll in various trainings (optional).