ROBOTIC PROCESS AUTOMATION (RPA)

Course Presentation
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Elective Course, 2019-2020, Fall Semester

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Acknowledgements

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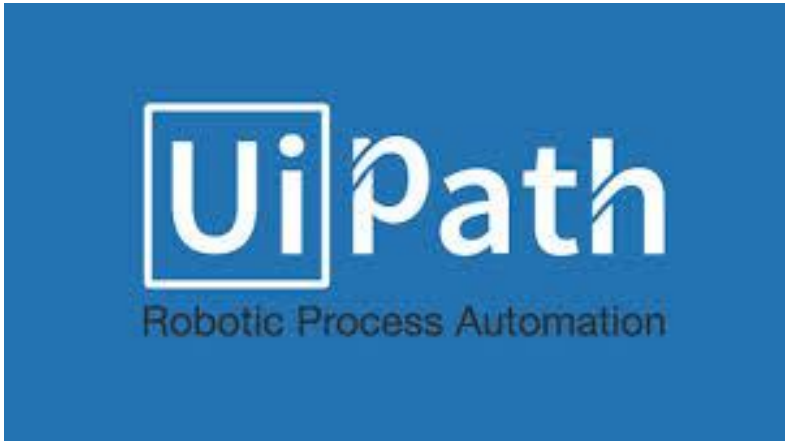

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Course Goals

- 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: develop technical skills to develop software robots.

Course Activities

- **Lecture: 2 hours/week; 14 weeks;**
- **Laboratory: 2 hours every 2 weeks;**
- **Project: turn in during week 13 or week 14.**

Final Grade

- **Final Grade (G) is one of the cases:**
  - **30%L+ 70%P *or***
  - **30%L+ 70% written exam (week 14).**

Activity Planning (1)

Week	Lecture	Laboratory
[S01] 30 September – 4 October	**Lecture 01.** Robotic Process Automation (RPA). UiPath Platform. Introduction to UiPath Studio	**Lab 01.** UiPath Studio installation. RPA project setup
[S02] 7 October – 11 October	**Lecture 02.** Business Process. **UIPath Project Topics Presentation**	
[S03] 14 October – 18 October	**Lecture 03.** Data processing. Operations on Data. Data manipulation	**Lab 02.** Repetitive business process identification. Automation plan
[S04] 21 October – 25 October	**Lecture 04.** User Events. Recorder	

Activity Planning (2)

Week	Lecture	Laboratory
[S05] 28 October – 1 November	**Lecture 05.** Advanced UI Interaction	**Lab 03.** Project input. Data processing
[S06] 4 November – 8 November	**Lecture 06.** Selectors	
[S07] 11 November – 15 November	**Lecture 07.** Image and Text Automation	**Lab 04.** UI interaction
[S08] 18 November – 22 November	**Lecture 08.** Excel. Data Tables	
[S09] 25 November – 29 November	**Lecture 09.** PDF and E-mail	**Lab 05.** Image and Text Automation
[S10] 2 December – 4 December	**Lecture 10.** Orchestrator. Basics. Features. Jobs scheduler. Queues	

Activity Planning (3)

Week	Lecture	Laboratory
[S11] 7 December – 11 December	**Lecture 11.** Project Organization	**Lab 06.** PDFs and E-mail Automation
[S12] 14 December – 18 December	**Lecture 12.** Testing. Deployment	
[S--] 23 December 2019 – 5 January 2020	**Christmas Break**	
[S13] 6 January – 10 January	**Lecture 13.** **Projects turn in**	**Lab 07.** **Projects turn in**
[S14] 13 January – 17 January	**Lecture 14.** **Projects turn in**	

Lab. Rules

- **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 exam with the P grade only and L=0;
  - Assignments can be graded with 10 only if they are delivered the next lab (except from **Lab06** that will be delivered in the same lab activity);
  - The penalty for delayed assignment delivery is 2 points per lab; a single lab delay will be allowed, i.e., max. grade 8 if assignment is not delivered on time;
- **Organization:**
  - Students have the choice to work as single or as 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.**

Lab. Assignments

- **goals:**
  - Acquire technical skills while developing various process automation using UiPath Studio by following the topics discussed during lectures;
- **assignments:**
  - **week 01-02: Lab01.** UiPath Studio installation. RPA project setup. Basic Concepts;
  - **week 03-04: Lab02.** Repetitive business process identification. Automation plan;
  - **week 05-06: Lab03.** Project input. Data processing;
  - **week 07-08: Lab04.** UI interaction;
  - **week 09-10: Lab05.** Image and Text Automation;
  - **week 11-12: Lab06.** PDFs and E-mail Automation;

- **3 out of 6 lab assignment should be delivered to compute (successfully) grade L;**
  - students may choose any 3 assignment labs to be graded;
  - **all assignments have the same weight when computing grade L;**

- **Lab activity (L) = 30% of the final grade (G)**

Project. Rules

- **P = Business Process Automation Project**
  - **P replaces the written exam;**
  - P is an individual student or a pair (of two) students project;
  - Any student enrolled in RPA elective course can register to elaborate and deliver P.
  - The registration to P requires filling with data the **RPAProjects** file available on Slack.
  - **The registration deadline is the end of week 04; the topic and/or the project title will be stated.**
  - **P will be delivered during week 13 or week 14 according to a scheduling that will be available by the end of week 11.**

Project. Assessment

- **Grade 5 = min. 3 sequences/flowcharts, min. 10 activities, min. 2 applications (Excel, Word, Wordpad, etc.);**
- **Grade 7 = Grade 5 + min. 3 UI interactions (basic, desktop), selectors;**
- **Grade 8 = Grade 7 + min. UI interactions (web), selectors;**
- **Grade 10 = Grade 8 + PDF and E-mail automation;**

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

UiPath Presentation. Project Ideas

- **week02:**
  - **UiPath company will present several RPA project ideas.**

Resources (1)

- **Slack**
  - link: slack.com;
  - Students will register by invitation or by e-mail in the workspace **RPA2019**

- channels:
  - ***#events-news***
    - events, announcements, news;
  - ***#lectures***
    - course presentation, lecture notes, demos;
    - references;
  - ***#labs***
    - lab rules, lab assignments;
    - demos;
  - ***#project***
    - business process automation project details.

Resources (2)

- **UiPath Studio, Community Edition – framework for process automation development;**
  - to install during **Lab01**;
  - free/renewable license;
  - link: https://www.uipath.com/platform-trial

- **UiPath Academy –e-learning platform for various trainings and tutorials;**
  - create an account;
  - enroll in various trainings;
  - link: https://www.uipath.com/rpa/academy

Final Grade

- **Final Grade (G) is one of the cases:**
  - **30%L[0..3/6] + 70%P *or***
  - **30%L[0..3/6] + 70% written exam (week 14).**