



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

Scope of Work

Project Planning

SINF

WeatherBot – chatbot for Messenger

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Project Description

The project is intended to serve students as one information platform about class schedules, combining this information with weather conditions, proposing appropriate behaviors. Project is created during course *Soluciones IT para sector informediario* during studies on Universidad Politecnica de Valencia.

The idea was created as a response to the demand for a unified information platform for students who need to check the schedule for the next day every day and also check the weather forecast. The main initiator of the project is Szymon Nosek from the *Scientific Organization of the University of Economics in Cracow*. According to that, all users can in simple way get all information which they want, just by quick question to chatbot in easy accessible place.

Project Objective

The main assumption of the project is to **get access to Open Data** and use them for specific tasks. The subaltern assumption is **to create a chatBot** for handling queries using previously configured access to selected Open Data. First goal is to create simple chatbot for weather information, and then improve it to final version.

Description of Work

In that part I am going describe all necessary requirements and evaluations factors, and also attach general plan for work, which will be briefly described in part *Metodology*.

Project Planning Facilitation

To be considered positive, the project will be evaluated by following factors:

- Definition of the problem and solution
- Relevance of the solution
- Knowledge of the context of application
- Used methods and procedures
- Achievement all objectives of the project
- Defined scope of the work
- Attendance at course
- Fulfillment plan of the project

Deliverables

Final product

Main part of the project - chatBot for Messenger with access to weather API and database with schedule for universities.

Plan of the project

All necessary documents created in first phase of work – Scope of Work with attached Metodology which all phases of implementation.

Project documentation

All other documents attachet to the project, especially userGuid with all functionalities of application.

Project Planning Reference Documents

OpenWeatherMap

source of meteorology Open Data

MessengerDevelopers

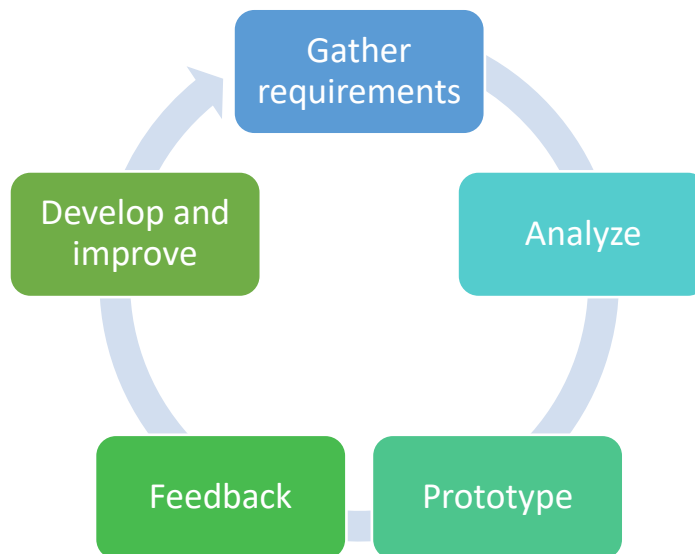
reference to documentation of chatbot at Messenger platform

General idea of implementation

- Iteration 1. Creating first chatbot for Messenger with user communication
- Iteration 2. Improving communication about information from weather API
- Iteration 3. Improving application about usage second data – from external database
- Iteration 4. Testing and final improving

Methodology

In my work, I am going to use prototyping lifecycle, which is, in my opinion, the most suitable lifecycle, which allows me to improve application step by step, achieving all previously defined goals. I am going to adapt the lifecycle and build application in 3 main iterations (each of them will bring different feature) and at the end, if it will be necessary in maximum 2 iterations develop final product.



Description for 1. iteration

Gather requirements

In this stage I am going to read about creating chatbot using Messenger platform and developer tools, do research for tutorials *How to create messenger chatbot* to collect all requirements from developer point of view to be able to implement all functionalities. The chatbot at the end of first iteration should be able to:

- Welcome user when they open the chat with information about *help* command.
- Show set of short instructions (as image or external userGuide)
- Provide simple communication based on predefined keywords

Analyze

In this stage I am going to analyze all information which I collected in previous stage and choose the best technology and resources to create prototype.

Prototype

In this stage I am going to implement all previously defined functionalities for first chatbot and finish with simple version of project. The functionalities which I implemented:

- Create simple Messenger bot with set of preferences and connected with Facebook page
- Create simple communication with user
- Define localization preferences
- Define weather preferences
- Define events preferences
- List actual preferences
- Let user change his preferences
- Improve communication to be more realistic

Feedback

In this stage I am going to ask testing group about experiences of usage and collect feedback, analyze it and choose which should be modified or implemented.

Based on response from my observation group (I asked 10 friends from Poland about their experiences with the chatbot). I decided to improve the AI of the chatbot for better recognition and reacts for user's inputs.

Develop and improve

In this stage I have to implement all what was defined from previous stage.

Description for 2. Iteration

Gather requirements

At this stage I had to learn about ChatFuel possibilities to use with external resources by JSON module. I defined also possible queries which will be performed from Chatfuel.

Analyze

In this stage I am going to analyze all information which I collected in previous stage and choose the best technology and resources to create next prototype. I also knew that I had to build my own server with some scripts to manage Chatfuel queries, and based on them, create another queries to APIs and send response to Chatfuel.

Prototype

At this stage:

- I have found hosting for my php scripts to manage queries and API.
- Gathered information about weather from OpenWeatherMap API.
- Gathered information about events from Eventbrite API.
- Displayed collected informations as response in Messenger

Feedback

I again asked the same group of 10 people about their user experiences after that stage and I analyzed the feedback. Based on their responses I decided to format text which is displayed on user's screen by splitting long messages to smaller, and by using font decorations.

Develop and improve

In this stage I have to implement all what was defined from previous stage.

Description for 3. Iteration

Originally, I planned to finish after 3 iterations which add recommendation feature, but because of lack of time and my illness during the holidays, I have to decide to finish project after 2. Iteration.