

# Function Requirement

## Existing Function

- When cloning the repository, it is downloaded on local machine
- Analyze repos recursively to detect good/bad Python coding patterns
- Generating CSV files that stores the the analysis data
- Producing graphs based on CSV files by using Bokeh library
- Visualize good pattern and bad patterns (Only Python)
- Pattern analysis parameters can be tuned.

## New Function

- Creating docker images that package all necessary libraries and dependencies
- When bad code style occurs, this tool suggest how to improve that code
- Allow a particular interval of commits to be analyzed

## 用語集

Teddy++

Repository

Source Code

Commit

Elastic Search

Bokeh

CSV

HTML Files

Code Pattern Files

Docker

Siamese Engine

## Use case Analysis

Use case ID	1	
Use case name	Analyze Github Repo	
Description	The user can use the program to analyze the good/bad patterns of Python code	
Actor	User	
Precondition	Docker is installed and image is ready	
Normal Flow	User	System
	1. Find repo link 2. Run Autorun script [A1]	3. clone repo to local machine[A2] 4. siamese engine analyze patterns of all commits from local repo 5. generate csv data 6. Bokeh generate HTML file using csv 7. Launch the graph with browser and display results
Alternative flows	A[1] Repo link does not exist A[2] User specify the interval of commits	A[1]Notify user that link does not exist A[2] analyze the specified interval of commits
Assumption		

Use case ID	2	
Use case name	View suggestions from results	
Description	The user can receive some suggestions to improve python code patterns	
Actor	User	

Precondition	Docker is installed and image is ready	
Normal Flow	User	System
	<ol style="list-style-type: none"> <li>1. Find the repo</li> <li>2. Run Autorun script [A1]</li> <li>8. Hover the mouse pointer to the particular Pattern</li> <li>10. Fix the python code based on suggestions</li> </ol>	<ol style="list-style-type: none"> <li>3. Clone repo to local machine[A2]</li> <li>4. Siamese engine analyze patterns of all 5.commits from local repo</li> <li>5. Generate csv data</li> <li>6. Bokeh generate HTML file using csv</li> <li>7. Launch the graph with browser</li> <li>9. Display style, file name, commitID, idiom-name, and suggestion</li> </ol>
Alternative flows	A[1] Repo link does not exist A[2] User specify the interval of commits	A[1] Notify user that link does not exist A[2] Analyze the specified interval of commits
Assumption		

**ToDo (1/15~1/22) :**

**To update the use case for suggestion (new use cases for new functions)**

**To make Use case diagrams**

**To make Robustness diagrams (one for each use case)**