Software Requirements Specification

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Dynamic Unit and Currency Converter

(UNITY 1.1)

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# 1.0. Introduction

## 1.1. Purpose

Designing a software application which acts as unit and currency converter.

1.2 Software Requirements (Assuming the target system to be a Windows machine)

Python 2.7.2 <http://www.python.org/ftp/python/2.7.4/python-2.7.4.msi>

wxPython GUI Module <http://downloads.sourceforge.net/wxpython/wxPython2.8-win32-ansi-2.8.12.1-py27.exe>

cx\_Freeze Module <http://prdownloads.sourceforge.net/cx-freeze/cx_Freeze-4.3.1.win32-py2.7.msi?download>

Open Exchange Rates API <http://openexchangerates.org/api/>

An active net connection is also required to fetch the realtime currency data otherwise it throws an HTTP Error and uses the default values.

## 1.3. Functioning of Project

This project employs the widgets provided in the wxPython module to build a GUI. wxNotebook widget is used to build the main frame in which the subsequent widgets are added.Other widgets whose use is made are Panel, RadioBox, Label etc.

To send HTTP requests to the target website urrlib2 module is employed. If there is an HTTP Error then the application does not start.The real time currency data is fetched from open\_exchange\_rates API which returns the currency data in JSON format with US Dollar as base currency. Use of regular expressions is made to extract the multiplying factors for different currencies.

Lastly to make the Python source code into a compiled executable binary for windows cx\_freeze module is used.

## 

## 1.3. Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
|  |  |
|  |  |
| API | Application Programming Interface |
| WxPython | An external module for Python GUI programming. |
| Urllib2 | Python library for sending HTTP requests. |
|  |  |
|  |  |
| JSON | Java Script Object Notation |
| Cx\_freeze | Third Party package to convert .py to exe |
|  |  |

## 2.1. Overview

We have used a drop down based menu navigation bar. It consists of 15 different classifications of units depending upon the physical quantity they measure. A separate menu is provided for currency conversion which enables us to covert currencies from one another.

## 2.2. Overall Description

**PRODUCT PERSPECTIVE:**

This software will help students, teachers and also working people by providing instantaneous results.

**USER CLASSES AND CHARACTERSTICS:**

**Offices:**

This software can be used in offices and data handling centers where data conversion is required. Offices such as Foreign Exchange, Money Transfer Agency and Share Trading etc. can benefit from it.

**Schools:**

The application can be used in schools and similar educational institutions where the students can learn the multiplying factor for different unit conversions.

# Personal Use:

Can be used as a personal extensible unit converter.