

TCC Automation Project

My Blog

Open Street Mapping

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TCC Automation

Introduction of TCC Automation

Automation is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. Raw data storage, electronic transfer, and the management of electronic business information comprise the basic activities of an office automation system.

TCC Automation

Objectives of TCC Automation

- Make your work less tedious.
- Trim hours off your workload.
- Reduce repetitive keyboard strokes or mouse-clicks.
- Make data entry easier with fewer tabs or mouse movements.
- Take any job you do longhand and make the computer do it for you.

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Languages and tools used

Programming language : Python

Framework : Django

Web Languages : Html, Java Script, CSS

Database : Mysql

Python

About Python

Python is a dynamic language, as in python coding is very easy and also it require less coding and about its interpreted nature it is just excellent. Python is a high level programming language and Django which is a web development framework is written in python language.

Python is an easy to learn, powerful programming language. Python runs on Windows, Linux/Unix, Mac OS X. Python is free to use, even for commercial products. Python can also be used as an extension language for existing modules and applications that need a programmable interface.

Django

Django

Django is an open source web application framework written in python. It lets you build high-performing, elegant Web applications quickly. Django focuses on automating as much as possible. Django adopts the standard MVC(Model-View-Controller) design pattern. But instead, their naming convention is the MTV(Model-Template-View).

Django

MTV

Model is an object relational mapping to your database schema. So each model is a class which represent a table in your database.

Template is simply HTML for your views. It also allows you to display different messages depending on whether or not a user logged in.

View could be a homepage or a page to display a user's information, for instance

MySQL

MySQL

Although Django supports all the Databases like sqlite, Mysql, postgresql etc but I used the Mysql. Mysql is world's most popular open source database. MySQL is written in C and C++.

Free-software-open source projects that require a full-featured database management system often use MySQL.

One of the greatest advantage of Django is that it synchronises the database only with one command without having any need to send different queries for insertion, deletion, updation etc. There is a file named models.py which is used for purpose of creating database. The command used for database synchronisation is

```
$ python manage.py syncdb
```

TCC Automation

Report

- Suspense Report
- Suspense-Clearance Report
- T.A./D.A. Bill
- Performa Bill
- Job Register
- Yearly/Monthly Income Report
- Transport Bill
- Other charge Bill
- Faculty Income distribution

TCC Automation

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- Main Register
- Receipt
- Department/lab Report
- Govt./Semi-Govt./Private Report
- Clearance Report
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Distribution of money

- College Income
- Administrative
- Development Funds
- Consultancy Asst.
- Service Tax
- Education Tax
- Higher-Education Tax

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My Contribution in the software

My work

- Made Login and registration application
- Added a report named 'Daily Report'
- Added a module named 'Labs'
- Introduced new tables in admin section
- Gave different database permissions to different staff members

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My work

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TCC Automation

Login Application

This increased the security of the project as now only the authorised users can have access to the software and thus use it. Any unauthorised user now cannot misuse it.

Login application

[Home](#) | [Log in](#) | [Register](#)

Welcome

Please register yourself if you are not



TCC Automation

Daily Report module

It was not possible earlier to have a record amount of a day in TCC or number of number of days selected but after introduction of this module in the software one can do so. This has moreover increased the level of automation.

Daily report module added

Testing & Consultancy Cell

Gndec Ludhiana

[Register Client](#)

Logged in: sandeep

[Home](#)

[Log out](#)

Year 2011-12

MENU BAR

JOB	REPORTS	LABS	NEW CLIENT	OTHER	SUSPENCE CLEARANCE
	CLIENT REPORT				
	MONTHLY TAX REPORT				
	SUSPENCE REGISTER				
	MAIN REGISTER				
	PREFORMA BILL REPORTS				
	JOB REGISTER (NON PAYMENT)				
	JOB REGISTER (PAYMENT)				
	GOV/SEMI-PRI/PRI				
	DAILY REPORT				

For Bo
Credit

Daily report module

Type of payment selected

Register Client Home Logged in: a
Log out

Start date: 2011-10-16
End date: 2011-10-19
Type: CASH
Submit

For Suggestions & Brickbats visit:
[Credit & Feedback](#)

Daily report module

Amount calculated

GURU NANAK DEV ENGINEERING COLLEGE LUDHIANA				
Daily Report Of Oct. 16, 2011 to Oct. 15, 2011 for cash payment				
Receipt No.	Date	Name of Parties	Amount	Total Amount
7	Oct. 16, 2011	lovely	5000	5515
12	Oct. 16, 2011	nikhil	200	220
9	Oct. 16, 2011	jespreet	6600	6618
11	Oct. 16, 2011	aman	200	220
SUM			11400	12573

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TCC Automation

Labs module

This module is used to find the amount recieved for a particular lab for the number of days selected. It gives the record for the labs in TCC for number of days selected. It has also automated the work.

Labs module added

Testing & Consultancy Cell

Gndec Ludhiana

[Register Client](#)

Logged in: sandeep

[Home](#)

[Log out](#)

Year 2011-12

MENU BAR

JOB	REPORTS	LABS	NEW CLIENT	OTHER	SUSPENCE CLEARANCE
---------------------	-------------------------	----------------------	----------------------------	-----------------------	------------------------------------

For Bouquets & Brickbats visit :
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Amount calculated for particular lab

labs module

GURU NANAK DEV ENGINEERING COLLEGE LUDHIANA

Description of SOM for July 12, 2011 to Aug. 1, 2011

Receipt No.	Date	Name of Parties	Amount	Total Amount
37	July 15, 2011	ana	8988	9914
38	July 15, 2011	ads	980987	1082029
41	July 20, 2011	jhgghd	73746	81342
53	July 22, 2011	SJGGSAIDH	82376	90861
SUM			1146697	1264146

TCC Automation

Introduction of new tables in admin

Introduction of new tables in admin has made the admin of software more powerful as now in order to change the database entries he can directly make changes by going to these tables.

Automation tables added in admin

Django administration Welcome, sandeep. Change password / Log out

Site administration

Auth	
Groups	Add Change
Users	Add Change

Automation

Amounts	Add Change
Cdf amounts	Add Change
Client jobs	Add Change
Client reports	Add Change
Job registers	Add Change
Proformabilis	Add Change
Proforma taxes	Add Change
Suspenses	Add Change
Ta_das	Add Change
Teachersss	Add Change
Transports	Add Change
Variables	Add Change

Registration

Registration profiles	Add Change
-----------------------	--------------------------------------------

Sites

Sites	Add Change
-------	--------------------------------------------

Recent Actions

My Actions

- [sandeep](#)
- [User](#)
- [TCC.com](#)
- [Site](#)
- [Variable object](#)
- [Variable](#)
- [Variable object](#)
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- [Variable](#)
- [Variable object](#)
- [Variable](#)

Blog in Django

My Blog

I made an application called My Blog in the report. It consists of all the necessary modules as the other blogs does have. The different moduled are:

- My Posts: It displays all the posts done by me.
- My Poems: The poems posted by me are displayed here.
- My Images/ Sketches: It contains all the images and sketches posted.

I have synchronized Mysql database with it thus all the values of posts, Poems and Images are fetched directly from database.

Front page of blog



Figure: Index page of Blog

OpenStreetMap

Introduction to Open Street Mapping

OpenStreetMap is a wiki page for maps and other geographical facts. People gather location data from a variety of sources such as recordings from GPS devices, from free satellite imagery or simply from knowing an area, and upload this data to OpenStreetMap. The uploaded data can be further modified, corrected and enriched by anyone who notices missing facts or errors.

Steps to add to OpenStreetMap

collecting Data

There are variety of ways of gathering data for OSM:

- Using GPS(Global Positioning Device) for tracking the paths to be mapped.
- Having Local Knowledge of the area.
- Using the imagery of the area to be mapped

Steps to add to OpenStreetMap

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Steps to add to OpenStreetMap

Uploading GPS data

The data we, collect in our GPS device is raw and for uploading it to OSM, following steps are to be followed:

- The raw data collected by us is in CSV(Comma-Separated Values) and it need to be converted into GPX (GPS eXchange Format). It can easily be done by using the GPX convertor.
- Once you have a GPX file containing a GPS trace, you should upload it to the site
- Now download the area containing those traces into JOSM

Steps to add to OpenStreetMap

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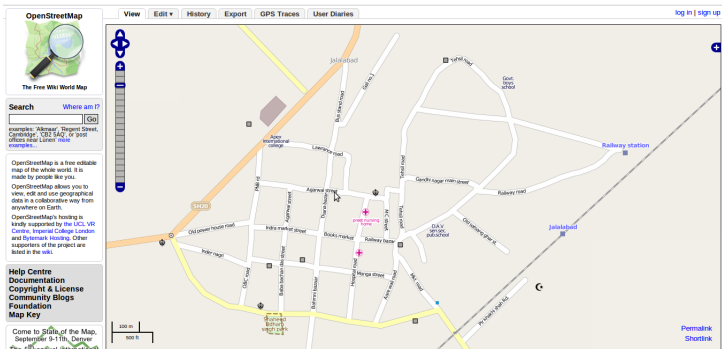
- The raw data collected by us is in CSV(Comma-Separated Values) and it need to be converted into GPX (GPS eXchange Format). It can easily be done by using the GPX convertor.
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Steps to add to OpenStreetMap

Create/Edit OSM data

Now edit the map of the area downloaded and make the editing according to the knowledge of the area or the data collected by GPS device.

Jalalabad Mapping



Software Release

Software Released at:

- [http : //automation.sarovar.org](http://automation.sarovar.org)

Working at:

- [http : //202.164.53.122/tcc11_12/](http://202.164.53.122/tcc11_12/)

References

Links

- [http : //python.org](http://python.org)
- [http : //djangoproject.com](http://djangoproject.com)
- [http : //djangobook.com](http://djangobook.com)
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