



“Prison Management System”

MR. SAISH NILESH WAGH, MR.SAGAR VIJAY MINDE, PROF. M. R. JADHAV

Department of Computer Science, Anjaneri, Trimbak Road, Nashik

Abstract: This project titled “Prison Management System” aims at providing management software for handling the inner working of Tihar Jail across the country. Since Tihar Jail already offers certain recreational facilities, employment opportunities and educational prospects with an official degree, however on my research, I realized that there was no inner management system for handling all activities taking place within the prison premises and could use a lot of improvisation. The report is based on 5 main sections- Introduction and Motivation, Literature Review, Design Modules, Implementation, Benefits and Scalability. Introduction and Motivation deals with the details of facilities offered with aim of transformation of prisoners so that they don't resort to their criminal ways, it also elaborates the inspiration taken from Kiran Bedi, former IPS who had a vision of transforming criminals into civilized human beings.

I. INTRODUCTION

1.1 History Originally, Tihar was a maximum security prison run by State of Punjab. In 1966, control was transferred to National Capital Territory of Delhi. Beginning in 1984, additional facilities were constructed, and the complex became Tihar Prison. Under the charge of Kiran Bedi, when she was Inspector General of Prisons, she instituted a number of prison reforms at Tihar, including changing its name to Tihar Ashram. She also instituted a Vipassana meditation program for both staff and inmates; initial classes were taught by S. N. Goenka. The Prison has also produced an inmate who has passed the Indian Administrative Service civil service examinations. Many of the inmates continue their higher education through distance education. The campus placement program was launched in 2011 for the rehabilitation of inmates about to complete their sentences. In 2014, a recruitment drive led to 66 inmates selected on the basis of their good conduct, received job offers with salaries up to 35000 (US\$570) per month, from as many as 31 recruiters, which included educational institutions, NGOs and private companies.

1.2 About Jails all over the world have transformed into a place of reformation. In India, the Tihar Jails have provided various facilities such as recreational facilities, educational facilities, panchayat systems, psychological treatment, yoga and meditation, creative art therapy to help overall development of inmates. Various bakery products, shirts, handlooms, paintings, etc. are available online under the brand name “TJ's” for people to purchase. These products are designed and manufactured by the inmates. Also a food court is established under the name “Tihar Food Court”, which has received rave reviews for the quality of food and gesture of inmates. So my project aims to create a management system for record management and automated task allocation for efficient time utilization, cost minimization and to help the government convert convicts into civilized individuals. Prison Management System Department of Computer Engineering 2021-2022

2 The project serves three main objectives:

- To deliver a system that covers all aspects of prison management from the admission to the release of the prisoner and connectivity across jails; brings in administrative efficiency and security; leads to prisoner empowerment.
- Using technology to bring transparency in the system and provide precise implementation of rules and make data easily available to promote efficient decision making.
- To bring in maximum accuracy in the prison management in all key functional and operational areas; to overcome the manual system in the process with efficient record keeping and make the work profile of staff much easier and smooth in day-to-day administrative work.

1.3 Motivation Kiran Bedi, national icon, and former IPS has a vision that criminals should be involved in self-improvement so that after serving their sentence, they can be a part of society once again and do not resort to their ways. This led to reformation of Tihar Jail, to Tihar Ashram. I would further like to contribute to the system by providing my software to the Government of India to help improve this initiation. In my belief, technology's primary purpose is to reach out all sections of society and help raise their standard of living

II. LITERATURE REVIEW

Paper 1- Prison Models and Prison Management Models and the Texas Prison System Submitted By- Gevana Lynn Salinas (Texas State University- San Marcos, Dept. Of Political Science, Public Administration Program), Summer 2009

Objective- To identify the characteristics of the Texas Prison System as compared to previous hierarchical and differentiated model with the model Texas Prison System is currently using and hence form a new module.

Abstract-Purpose: The first purpose of this study is to describe the characteristics of the two prevailing prison system models and three prison management models through the use of scholarly literature. The second purpose is to conduct a research study to describe which prison system model and prison management model the Texas Department of Criminal Justice (TDCJ) is using to both operate and manage the Texas Prison System. Finally, the study will present conclusions and



recommendations for future research. Methodology: The methodology used in this research study is document analysis. Documents were reviewed and retrieved from agency and division mission statements; agency and division overviews; agency budgets; an agency survey; and policy and procedure handbooks and manuals. These documents were used to implement the conceptual framework. Results: The results showed the TDCJ shares characteristics from the Hierarchical and Differentiated Model, as well as the Control and Responsibility Model. However, the TDCJ appears to operate under the Differentiated Model and is managed under the Control Model based on the research. The mission statements, division overviews, and policy and procedure explain the primary goal of the Texas Prison System is to rehabilitate and reintegrate offenders back into society as productive law-abiding citizens. The Texas Prison System and prison administrator's primary goals are to maintain control of the prison system and the care, custody, and control of inmates following strict guidelines and policy and procedure.

III. METHODOLOGY

Secondary and primary data collected from interviews with various stakeholders. The findings arrived through this case study point towards the positive impact of e-governance programs with regard to integrated and holistic prison management

IV IMPLEMENTATION

4.1 Web Framework Used- Django 4.1.1 Introduction to Django Web Framework Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so we can focus on writing our app without needing to reinvent the wheel. It's free and open source. written in Python, which follows the model-view-controller architectural pattern. It is maintained by the Django Software Foundation (DSF), an independent organization established as a 501(c)(3) nonprofit. Django's primary goal is to ease the creation of complex, database-driven web application. Django emphasizes reusability and "pluggability" of components, rapid development, and the principle of don't repeat yourself. Python is used throughout, even for settings, files, and data models. Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models. Some well-known sites that use Django include Pinterest, Instagram, Mozilla, The Washington Times, Disqus, and the Public Broadcasting Service. 4.1.2 History Django was born in the fall of 2003, when the web programmers at the Lawrence JournalWorld newspaper, Adrian Holovaty and Simon Willison, began using Python to build applications. It was released publicly under a BSD license in July 2005. The framework was named after guitarist Django Reinhardt. In June 2008, it was announced that a newly formed Django Software Foundation (DSF) would maintain Django in the future. Prison Management System Department of Computer Engineering 2021-2022 16 4.1.3 Features 4.1.3.1 Components The core Django MVC framework[4][5] consists of an object-relational mapper which mediates between data models (defined as Python classes) and a relational database ("Model"); a system for processing requests with a web templating system ("View") and a regular-expressionbased URL dispatcher ("Controller"). Also included in the core framework are: A lightweight and standalone web server for development and testing. A form serialization and validation system which can translate between HTML forms and values suitable for storage in the database. A template system that utilizes the concept of inheritance borrowed from object-oriented programming. A caching framework which can use any of several cache methods. Support for middleware classes which can intervene at various stages of request processing and carry out custom functions. An internal dispatcher system which allows components of an application to communicate events to each other via pre-defined signals. An internationalization system, including translations of Django's own components into a variety of languages. A serialization system which can produce and read XML and/or JSON representations of Django model instances.

V.CODE

```
Project Code Models.pyfrom django.utils import timezone class pdetail(models.Model):
prisoner_name=models.CharField(max_length=50) prisoner_add=models.CharField(max_length=500)
emergency_contact=models.IntegerField() gender=models.CharField(max_length=1)
crime=models.CharField(max_length=50,default=None) original_sentence_days=models.IntegerField(default=0)
potential_sentence_days=models.IntegerField(default=0) date_of_conviction=models.DateTimeField(default=None)
def __str__(self): return self.prisoner_name def status(self): if self.original_sentence_days==0: if self.date_of_conviction
<= timezone.now() - datetime.timedelta(days=self.potential_sentence_days/2): return "release" else: return "under trial"
else: Prison if self.date_of_conviction<=timezone.now() - datetime.timedelta(days=self.original_sentence_days): return
"release" return "convicted" class pcomplaint(models.Model): prisoner_name=models.ForeignKey(pdetail)
```



```

department=models.CharField(max_length=20) complaint_text=models.CharField(max_length=200)
date_of_complaint=models.DateTimeField('date of complaint') def type_of_complaint(self): if
self.department=="dispute" or self.department=="appliance": return "personal" elif self.department=="food" or
self.department=="hygiene" or self.department=="medical attention": return "basic" else: return "additional" def
priority_of_complaint(self): if self.type_of_complaint() == "basic": return 1 elif self.type_of_complaint() == "personal":
if self.date_of_complaint <= timezone.now() - datetime.timedelta(days=15): return 1 return 2 elif
self.type_of_complaint() == "additional": if self.date_of_complaint <= timezone.now() - datetime.timedelta(days=30):
return 1 elif self.date_of_complaint <= timezone.now() - datetime.timedelta(days=15): return 2 return 3 class
parole(models.Model): prisoner_name=models.ForeignKey(pdetail) parole_reason=models.CharField(max_length=20)
date_of_application=models.DateTimeField() date_of_parole_sanction=models.DateTimeField(default =
timezone.now() - datetime.timedelta(days=5400)) parole_days=models.IntegerField(default=0)
prisoner_return=models.CharField(max_length=3, default="NA") reason_text=models.CharField(max_length=200) def
parole_priority(self): if self.parole_reason=="death in family": return 1 elif self.parole_reason=="family event": return 2
else: return 3 def parole_status(self): if self.date_of_parole_sanction<=timezone.now() - datetime.timedelta(days=3650):
return "to be sanctioned" elif self.date_of_parole_sanction>=timezone.now() -
datetime.timedelta(days=self.parole_days): return "parole ongoing" elif self.date_of_parole_sanction<=timezone.now()
- datetime.timedelta(days=self.parole_days) and self.prisoner_return=="Yes": return "parole over" else: return "call back
inmate!" class task(models.Model): prisoner_name=models.ForeignKey(pdetail) regular_task=("mess cleaning
task","mess serving task","mess dishes task","canteen cleaning task", "canteen serving task", "canteen dishes task",
"washroom cleaning task", "appliance cleaning task", "corridor cleaning task")
degree=models.CharField(max_length=30, default="NA") profession=models.CharField(max_length=30,
default="NA") def specialization_task_status(self): if self.degree=="NA" and self.degree=="NA": if
pdetail.crime=="rape": Prison Management System Department of Computer Engineering 2021-2022 34 return "Task
cannot be assigned" else: return "Assign Task" else: return "Task assigned" def regular_task_assignment(self):
x=random.randint(1,9) return regular_task[x] Admin.pyfrom django.contrib import admin from msystem.models
import pdetail,pcomplaint,parole,task class pdetailAdmin(admin.ModelAdmin):
list_display=('prisoner_name','gender','crime','status') list_filter=['date_of_conviction'] class
pcomplaintAdmin(admin.ModelAdmin):
list_display=('prisoner_name','date_of_complaint','type_of_complaint','priority_of_complaint')
list_filter=['date_of_complaint'] class paroleAdmin(admin.ModelAdmin):
list_display=('prisoner_name','parole_reason','date_of_application','parole_priority','parole_status')
list_filter=['date_of_application'] class taskAdmin(admin.ModelAdmin):
list_display=('prisoner_name','degree','profession','specialization_task_status') admin.site.register(pdetail,pdetailAdmin)
admin.site.register(pcomplaint,pcomplaintAdmin) admin.site.register(parole,paroleAdmin)
admin.site.register(task,taskAdmin) Settings.pyimport os BASE_DIR = os.path.dirname(os.path.dirname(__file__))
TEMPLATE_DIRS = [os.path.join(BASE_DIR,'templates')] # Quick-start development settings - unsuitable for
production # See https://docs.djangoproject.com/en/1.7/howto/deployment/checklist/ # SECURITY WARNING: keep
the secret key used in production SECRET_KEY =
'w+@oru0$p_vns*%%m3nax&)2=1$5w*rcq)4e+1bj#lka&d#0z$' # SECURITY WARNING: don't run with debug
turned on in production! DEBUG = True TEMPLATE_DEBUG = True ALLOWED_HOSTS = [] # Application
definition INSTALLED_APPS = ( 'django.contrib.admin', 'django.contrib.auth', 'django.contrib.contenttypes',
'django.contrib.sessions', 'django.contrib.messages', 'django.contrib.staticfiles', 'msystem', ) MIDDLEWARE_CLASSES
= ( 'django.contrib.sessions.middleware.SessionMiddleware', 'django.middleware.common.CommonMiddleware',
'django.middleware.csrf.CsrfViewMiddleware', 'django.contrib.auth.middleware.AuthenticationMiddleware',
'django.contrib.auth.middleware.SessionAuthenticationMiddleware',
'django.contrib.messages.middleware.MessageMiddleware',
'django.middleware.clickjacking.XFrameOptionsMiddleware', ) ROOT_URLCONF = 'PMS.urls'
WSGI_APPLICATION = 'PMS.wsgi.application' # Database #
https://docs.djangoproject.com/en/1.7/ref/settings/#databases DATABASES = { 'default': { 'ENGINE':
'django.db.backends.sqlite3', 'NAME': os.path.join(BASE_DIR, 'db.sqlite3'), } } # Internationalization #
https://docs.djangoproject.com/en/1.7/topics/i18n/ LANGUAGE_CODE = 'en-us' TIME_ZONE = 'UTC+5:30'
USE_I18N = True USE_L10N = True USE_TZ = True # Static files (CSS, JavaScript, Images) #
https://docs.djangoproject.com/en/1.7/howto/static-files/ STATIC_URL = '/static/' Base_site.html {% extends
"admin/base.html" %} {% block title %}{{ title }} | {{ site_title|default:_('Django site admin') }}{% endblock %} {%
block branding %}

```



Tihar Administration

```
{% endblock % } {% block nav-global % }{% endblock % } Manage.py- #!/usr/bin/env python import os import sys if __name__ == "__main__": os.environ.setdefault("DJANGO_SETTINGS_MODULE", "PMS.settings") from django.core.management import execute_from_command_line execute_from_command_line(sys.argv)
```

V. RESULTS

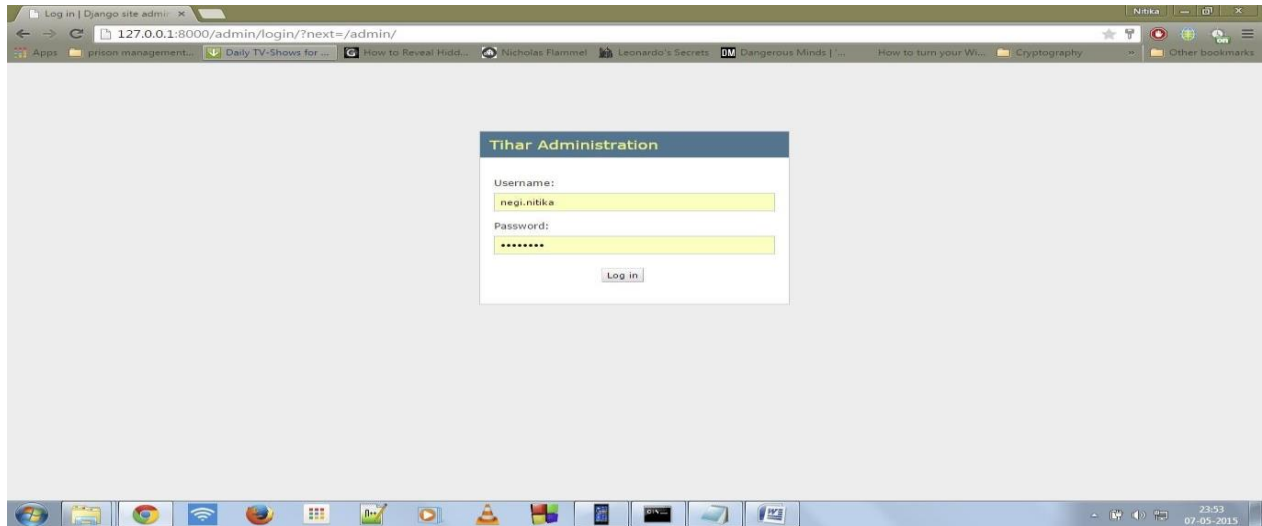


Figure 6

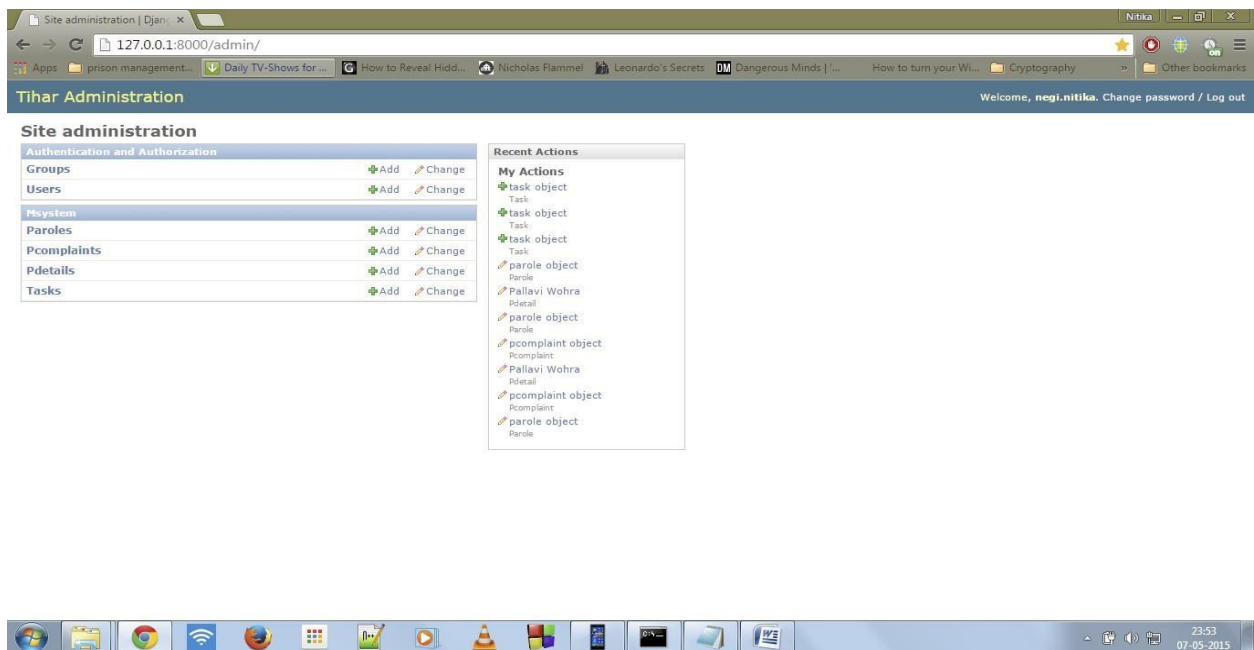


Figure 7

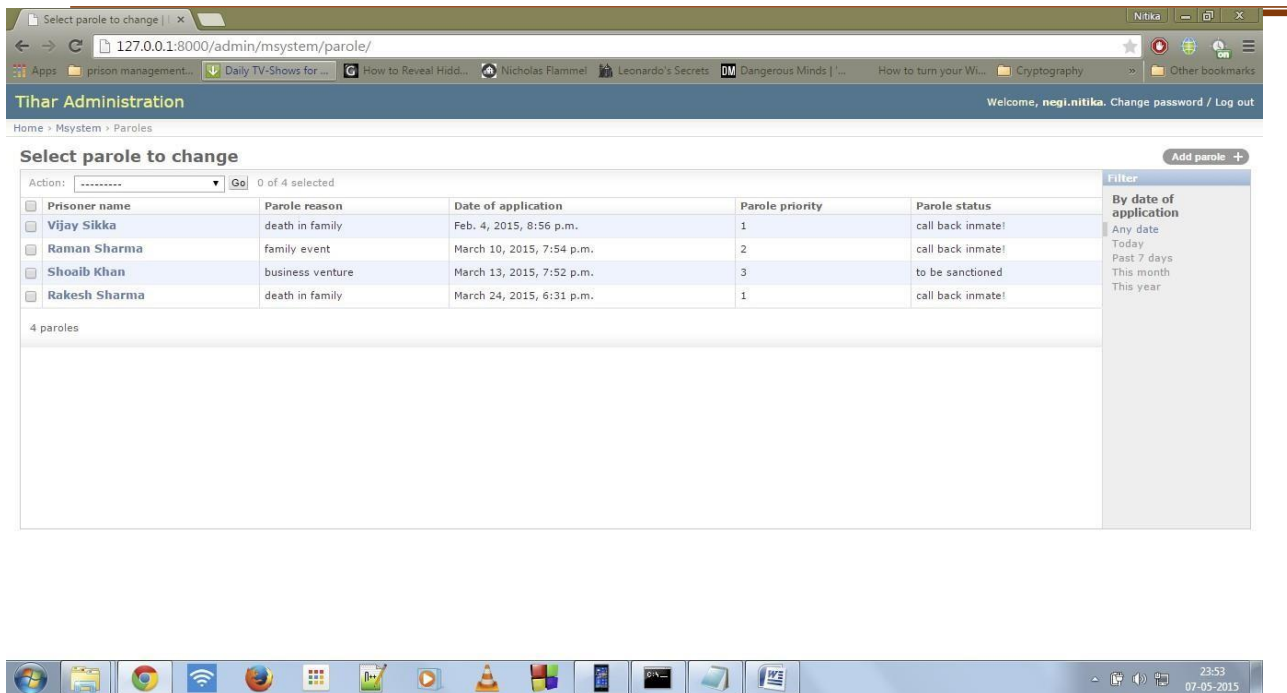


Figure 8

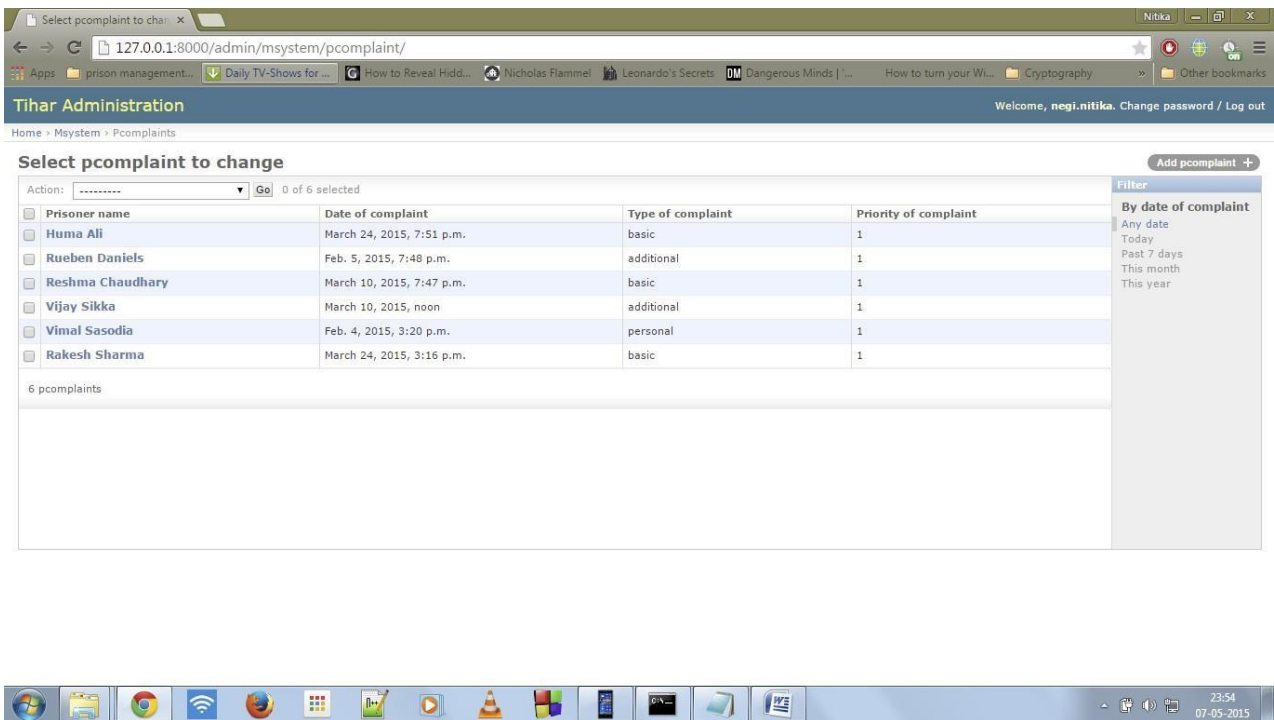


Figure 9



Prison Management System

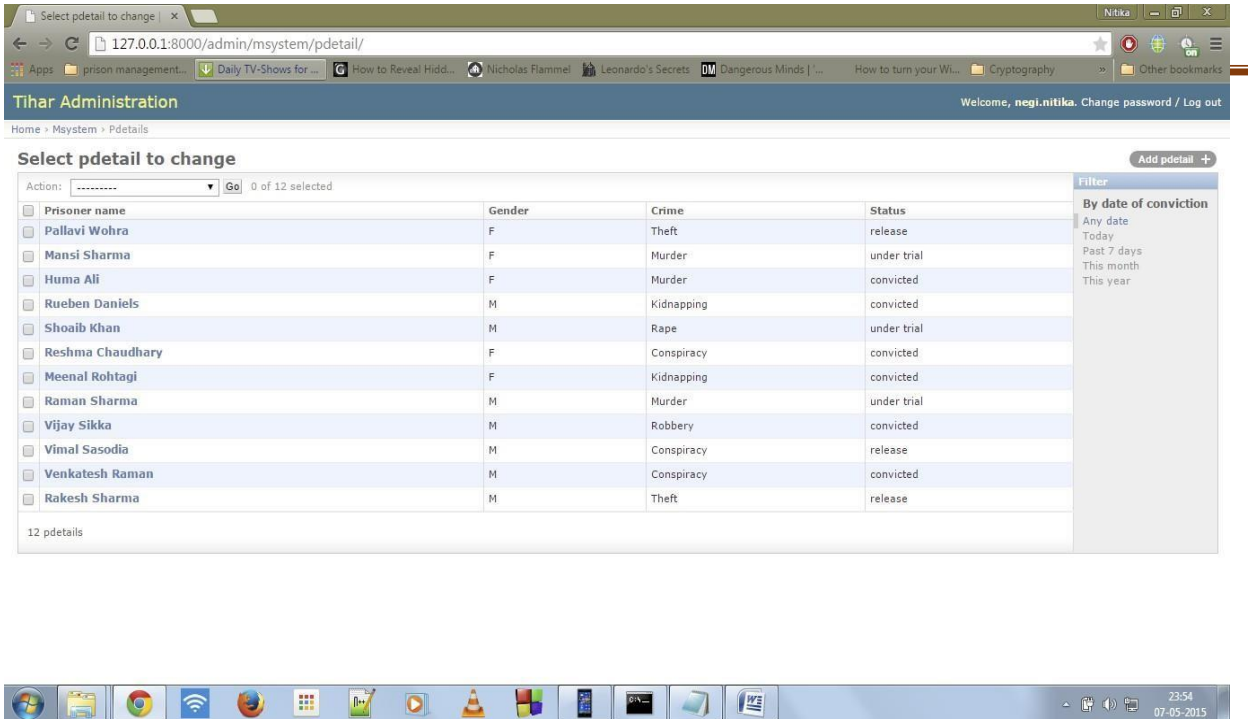


Figure 10

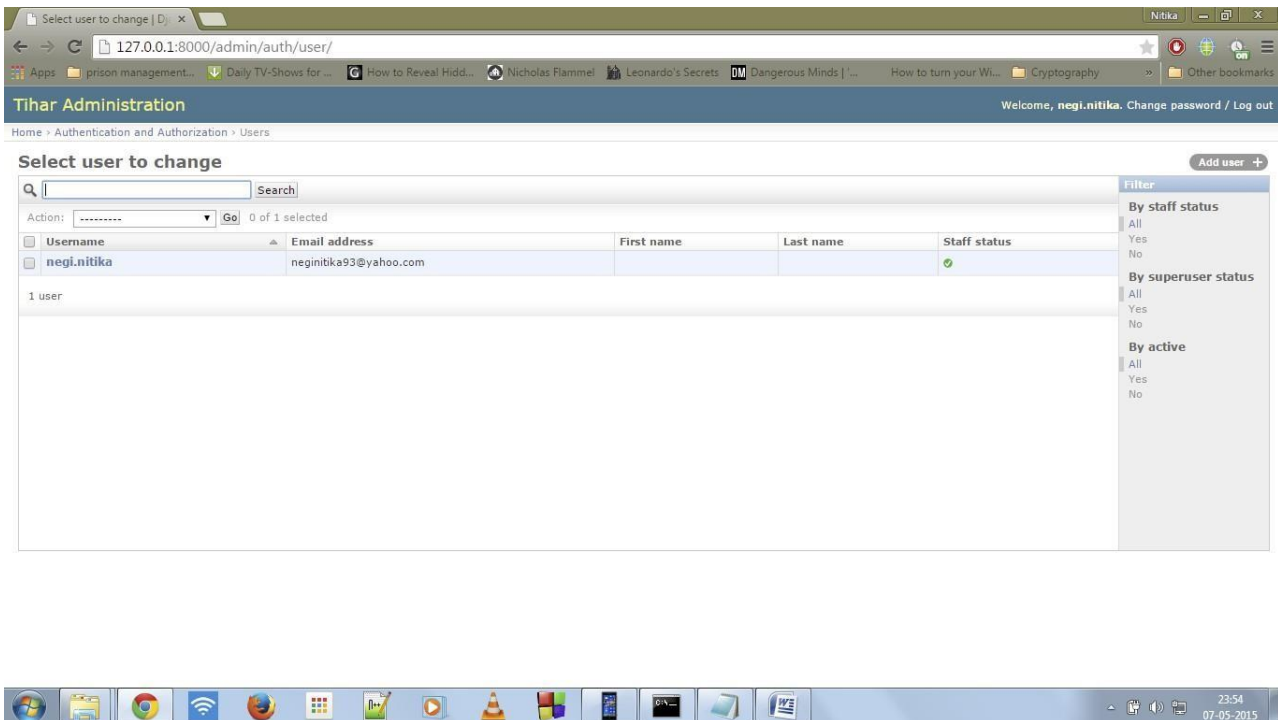


Figure 11



VI CONCLUSION

In this project report I highlighted how Prison Management works across the country and beyond. I also mentioned how Tihar Jail, by the effort of Kiran Bedi, has completely changed its course from being a place of punishment to a place of reformations and hope. This project will contribute to that vision and also is a step towards “Digital India”. The four modules focus on basic and unattended matters of prison management and also ensure minimization of corruption. Prison Management System is highly scalable and has a high scope for future expansion.

REFERENCES

1. *Paper 1- Prison Models and Prison Management Models and the Texas Prison System* submitted by Gevana Lynn Salinas (Texas State University- San Marcos, Dept. Of Political Science, Public Administration Program), Summer 2009
2. *Paper 2- Prison Management System for Arthur Road Jail* in Mumbai, Maharashtra, India. Submitted by Rahul Singh, Sr. Consultant, KPMG, 2010
3. *Case Study- Prison Management System (PRISMS) An e-Governance Project of the Govt. of Goa* By Osama Manzar 2011-2012

4. *Article- Tihar Jail* by Kiran Bedi (Adapted by Ananya Parthibhan) taken from her autobiography “I DARE!”
Other References-

1. delhi.govt.in
2. wikipedia.org/wiki/Tihar_Jail
3. tihartj.nic.in
4. The wall street journal
5. ndtv.com/articles/india
6. <https://www.djangoproject.com/>
7. <http://www.sqlite.org/>
8. ipi.org.in/texts/nsip/nsip-full/tihar
9. dailymail.co.uk/indiahome/indianews
10. <https://www.djangoproject.com/>
11. thehindu.com
12. timesofindia.indiatimes.com