

***COLLEGE OF SCIENCE AND TECHNOLOGY***

# SCHOOL OF ICT

**DEPARTMENT OF INFORMATION TECHNOLOGY ACADEMIC YEAR: 2018 - 2019**

# WEEKLY LOG BOOK

Name of student: Eric NIYONKURU Reg. No: 217085342

Department/Programme: INFORMATION TECHNOLOGY

Name of company/Organization: UNIVERSITY OF RWANDA/college of science and technology.

Weekly Report No: 1/8 to 8/8 from: 16, July to 19, July

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| Day/Date | Brief Description of work performed | No. of Hours |
| Monday |  |  |
| Tuesday 16, July | INTERSHIP DESCRIPTION | 6 hours |
| Wednesday 17, July | INTRODUCTION TO PYTHON BASICS | 8 hours |
| Thursday 18, July | ADVANCED PYTHON | 8 hours |
| Friday 19, July | INTRODUCTION TO PYTHON FRAMEWORK | 8 hours |
| Total hours |  | 30 hours |

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| Sequence of activities for main job/assignment | | |
| Introducing us on what we will do in internship | A brief description of all we going to do in the internship |  |
| Introduction to python programming | Revising previous programming languages like java |  |
| Learn python basic on solorlearn | How to declare variable in python |  |
| Python basics | Learn how to declare array, tuples and list in python |  |
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Note: Absence of trainee must be indicated on the log book

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| Details of main job |
| The first week of my internship our supervisor gives us welcome in internship class, And introduce us to what we will cover during the whole period of 8 weeks.  On the first day we make a quick recover on the previous programming language we learned so far, in order to be able to learn new language which is python that we will use in the internship.  We learned python basics using different materials like solorlearn, progate, and where we get stack, we ask our supervisor and get understanding.  We learned how to declare variables, declare arrays, list and how to create functions and class in python.  We also introduced to python framework called Django which we will use in coming weeks during building of our web application system. |

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Weekly Report No: 2/8 to 8/8 from: 22, July to 26, July

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  22, July | Complete beginner’s guide to Django  **Part 1 Getting started with Django**  installation of required resources. | 8 h |
| Tuesday  23, July | Complete beginner’s guide to Django  **Part 1 Getting started with Django**  How to create Django projects, and Django apps. | 8 h |
| Wednesday  24, July | Complete beginner’s guide to Django  **Part 2 Fundamentals of Django**  Web board project, and models | 8 h |
| Thursday  25, July | Complete beginner’s guide to Django  **Part 2 Fundamentals of Django**  Views, Templates, and static files  Introduction to Django admin. | 8 h |
| Friday  26, July | Complete beginner’s guide to Django  **Part 2 Fundamentals of Django**  Introduction to Django admin. | 8 h |
| Total Hours |  | 40 hours |

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| Sequence of activities for main job/assignment | | |
| installation of required resources. | Installation of python, Django, and virtualenv |  |
| create Django projects, and Django apps. | Create Django project and then create Django app (hello world!) inside Django project |  |
| Django web board Project, and project models | Design the wireframes of the project, creation and migration of models |  |
| Views, Templates, and static files | Django template engine setup  Testing the homepage  static files setup |  |
| Introduction to Django admin | How to create super user of Django project. |  |

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| Details of main job |
| After learning python basics and get an introduction to Django framework of python programming, now we go deeper in Python framework called Django.  we install Python, Django, and virtualenv, after installation of all required resource we learn how to create Django project and Django application.  we learn how to configure template engine, how to create application views and how to create supper user account of the whole project.  After knowing how to create projects and applications, and how to configure all requirement we start a project called board application that will be used in this whole series or parts of Complete beginner’s guide to Django where registered user can post any topic, and other user can make a comment on that topic but the owner of the topic he/she can add, update and delete topic. |

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Weekly Report No: 3/8 to 8/8 from: 29, July to 2, Aug

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  29, July | Complete beginner’s guide to Django  **Part 3 Advanced concept**  Django URLS and Reusable template | 8 h |
| Tuesday  30, July | Complete beginner’s guide to Django  **Part 3 Advanced concept**  Django Forms | 8 h |
| Wednesday  31, July | Complete beginner’s guide to Django  **Part 4 Django Authentication**  Initial setup | 8 h |
| Thursday  1, Aug | Complete beginner’s guide to Django  **Part 4 Django Authentication**  Sign up, login | 8 h |
| Friday  2, Aug | Complete beginner’s guide to Django  **Part 4 Django Authentication**  Logout, password reset and password change | 8 h |
| Total hours |  | 40 hours |

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| Sequence of activities for main job/assignment | | |
| Django URLS and Reusable template | . create Django urls  . advanced urls |  |
| Django Forms and Django Model Forms | . how not to implement and validate form  . create form in right way  . reusable form in template |  |
| **Django Authentication**  Initial setup | . introduction to Django Authentication  . design wireframes for authentication |  |
| **Django Authentication**  Sign up, login | Create views and template for signup and login page |  |
| **Django Authentication and Authorization**  Logout, password change rest, Roles and Permissions | Create views for password reset, reset done, reset done confirm, reset done compete |  |

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| Details of main job |
| In the third week we learn advanced concepts in django framework, we learn how to create Django urls and how to connect it to corresponding views so that you can call that urls path and get what you are looking for.  While you are building web application you will need a form, we learned how to create forms in Django and how you can reuse that form wherever you need content on it by importing that form where you need to use it.  Not everyone who can add, delete or update topic in this project, you must first be registered into the app to make that tasks, we learn how to create signup, login, and logout forms and their corresponding views, templates, and urls.  In case user forget password or need to change password he/she can do it. We learn how to create views and urls that allow user to change or reset their password. |

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Weekly Report No: 4/8 to 8/8 from: 5, Aug to 9, Aug

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  5, Aug | Complete beginner’s guide to Django  **Part 5 Django ORM**  Introduction to Django ORM | 8 hours |
| Tuesday  6, Aug | Complete beginner’s guide to Django  **Part 5 Django ORM**  Accessing the authenticated user | 8 hours |
| Wednesday  7, Aug | Complete beginner’s guide to Django  **Part 6 Class Based view**  Function and class-based view | 8 hours |
| Thursday  8, Aug | Complete beginner’s guide to Django  **Part 6 Class Based view**  Generic class-based view | 8 hours |
| Friday  9, Aug | Complete beginner’s guide to Django  **Part 6 Class Based view**  Add markdown and final adjustment | 8 hours |
| Total Hours |  | 40 hours |

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| Sequence of activities for main job/assignment | | |
| Introduction to Django ORM | What is ORM, how to use it and what It help while building Django projects. |  |
| Django ORM  Accessing the authenticated user | Topic post view, reply post view, query set and migrations |  |
| Function and class-based view | Function class-based view  Class based view, generic class-based view |  |
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| Details of main job |
| In the fourth week we learned Django ORM (object relation mapping), which help Django developer to create different queries which help application end user to retrieve data from database.  We learned how to create views using different ways such as  **1.Functions based view:** the simplest representation of a Django view, it’s just a function that receives an **HTTP Request**object and returns an **HTTP Response.**  **2.Class based View:** is every Django view defined as a Python class that extends the Django.views.generic.view abstract class. A class-based view essentially is a class that wraps a function-based view.  **3.Generic class view:** are built-in class-based view that solve specific problems such as listing views, create, update, and delete views.  We also learn how to add paginations to the page so that if topics are more than list of number you want to be displayed you could be able to go to next page easily. markdown to our pages which help user to type, or edit topics or post easily. |

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Weekly Report No: 5/8 to 8/8 from: 12, Aug to 16, Aug

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| Day/date | Brief description of work performed | No. of Hours |
| Monday 12, Aug | Analysis of system we work on. | 8 hours |
| Tuesday 13, Aug | Design wireframes/ Markups of the system | 8 hours |
| Wednesday  14, Aug | Design the navigation site of the system | 8 hours |
| Thursday 15, Aug | Draft of Entity relationship models | 8 hours |
| Friday 16, Aug | Complete Entity relationship models of System | 8 hours |

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| Sequence of activities for main job/assignment | | |
| Analysis of system we work on. | Understanding the system, we going to work on |  |
| Design wireframes/ Markups of the system | Design different wireframes like login wireframe  Dashboards wireframes for all users |  |
| Design the navigation site of the system | Design and understand the flow within the system. |  |
| Draft of Entity relationship models | Make a draft of Entity relationship model  And finally complete Entity relationship model |  |

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| Details of main job |
| The fifth week we get the project that we will working on in the remaining weeks. The project is called University of Rwanda in country mission authorization system (URIMAS).  In this week we first discuss with team members how we understand system, what we will need during implementation of the system.  After understanding the system we design how system will be look like, by using tool called draw.io.  After designing all the wireframes we design the navigation site which help us to understand the all flow within the system.  After understanding the flow within the system, we design the entity relationship model or the database schema of the system. |

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Weekly Report No: 6/8 to 8/8 from: 19, Aug To 23, Aug

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  19, Aug | **PWSAFRICA workshop**  Setting up the environment | 8 hours |
| Tuesday  20, Aug | **PWSAFRICA workshop**  Functions, while loops and Randomness | 8 hours |
| Wednesday  21, Aug | **PWSAFRICA workshop**  Dictionaries, and Problem solving | 8 hours |
| Thursday  22, Aug | **PWSAFRICA workshop**  Advanced Dictionaries | 8 hours |
| Friday  23, Aug | **PWSAFRICA workshop**  Numpy | 8 hours |
| Total hours |  | 40 hours |

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| Sequence of activities for main job/assignment | | |
| Setting up the environment | Installation of Anaconda  How to use anaconda platform |  |
| Functions, while loops and Randomness | How to use functions, and how to use while loop in python |  |
| Dictionaries, and Problem solving | How to use dictionaries, list and array in python |  |
| Numpy | Install numpy, and how to use Numpy |  |

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| Details of main job |
| In the sixth week I attend python workshop called PWSAFRICA which held at University of Rwanda Nyarugenge campus, and our tutor are the student of Glasgow university.  This week we first setup the environment/configure the required resources that will be used in the workshop, we start by installation of anaconda, a python platform which used by scientist to solve problems using technology.  We learn how to declare functions, how to call function, we learn how to use while loop and we learn how to declare dictionaries, list and array in python.  We also learn numpy, a multidimensional array, which allow array of different dimension, and different type to go in one array or container and start using it as one array. We also find an extra time with my team and work on previous project called URIMAS (University of Rwanda in country mission Authorization system). Which we will present as our internship project. |

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Weekly Report No: 7/8 to 8/8 from: 26, Aug to 30, Aug

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  26, Aug | **PWSAFRICA workshop**  Class | 8 hours |
| Tuesday  27, Aug | **PWSAFRICA workshop**  Work on final Project | 8 hours |
| Wednesday  28, Aug | **PWSAFRICA workshop**  Work on final Project | 8 hours |
| Thursday  29, Aug | **PWSAFRICA workshop**  Work on final Project | 8 hours |
| Friday  30, Aug | **PWSAFRICA workshop**  Project presentation | 6 hours |
| Total Hours |  | 38 hours |

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| Sequence of activities for main job/assignment | | |
| class | What is class in python  How to declare, and call class in python |  |
| Working on Project | Choosing what project to work on as your final project. |  |
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| Details of main job |
| This week we learned about class. python, like other high-level language has an object-oriented programming which allow user to create objects, use of inheritance, constructor and distractor.  After know python fundamentals we started working on the final project. There were two project, data analysis and language interpreter. I decide to work on language interpreter project.  We develop a own language interpreter using python script .  Our language interpreter were been using special character and symbols .  We also find an extra time with my team and work on previous project called URIMAS (University of Rwanda in country mission Authorization system). Which we will present as our internship project. |

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Weekly Report No: 8/8 to 8/8 from: 2, Sept To 6, Sept

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| Day/date | Brief description of work performed | No. of Hours |
| Monday  2, Sept | **Coding part for URIMAS System**  Create urimas project and apps | 8 hours |
| Tuesday  3, Sept | **Coding part for URIMAS System**  Create signup, login views, urls and their templates | 8 hours |
| Wednesday  4, Sept | **Coding part for URIMAS System**  Create project models, forms and their corresponding views | 8 hours |
| Thursday  5, Sept | **Coding part for URIMAS System**  Create views for all staffs | 8 hours |
| Friday  5, Sept | **Project presentation** | 6 hours |
| Total hours |  | 38 hours |

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| Sequence of activities for main job/assignment | | |
| Create urimas project and apps | Create project and app, configure or register app in settings |  |
| Create signup, login views, urls and their templates | Create signup and login view, form, urls and corresponding templates |  |
| Create views for all staffs | Create views for supervisor, authorizer and other users, and their routes in urls, and their templates |  |
| Present project | Present project to supervisor |  |

Note: Absence of trainee must be indicated on the log book

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| Details of main job |
| This is the last week of my internship, this is the week I worked more extra time to fulfil what am supposed to do in a period of 8 weeks.  Me and my teammate, we first create all required models, and make the migrations of our models in order to start using our database (retrieving and saving data to or from our database). After  we create signup view, configure its routes in urls and create the forms which allow admin of the system to register new user to the system.  We also create login view, template, form and configure its routes in urls which allow registered user to login to system.  We create views, template, and configure routes for all users needed to use our system. After finalize the whole project we go to see our supervisor to present the whole project. |

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