Activity based new technique of Effort & Cost Estimation using Functional Measurement Type for web application.

by

Sayed Mohsin Reza (Roll: 150102)

Advisor: Dr. M. Shamim Kaiser

Institute of Information Technology
Jahangirnagar University
Savar, Dhaka-1342
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DECLARATION

We hereby declare that this system is based on the results found by ourselves. Materials of work found by other are mentioned by reference. This system, neither in whole nor in part, has been previously submitted for any degree.

Sayed Mohsin Reza
Roll: 150102

CERTIFICATE

This is to certify that the thesis proposal entitled **Activity based new technique of Effort & Cost Estimation using Functional Measurement Type for web application** and submitted by Sayed Mohsin Reza for the degree of Master's of Science. He embodies original work under my supervision to the best of my knowledge.

(Signature in full of The Supervisor)
Dr. M Shamim Kaiser
Associate Professor,
Institute of Information Technology,
Jahangirnagar University.

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ABSTRACT

Software cost models and effort approximations support project supervisors to distribute resources, control budgets and agenda and develop modern practices, leading to projects completed on time and within financial plan. If cost and effort are determined suspicious in software projects, suitable occasions can be missed; whereas expectant predictions can be affected to some resource losing. In the context of web development, these issues are also vital, and very challenging given that web projects have short schedules and very fluidic opportunity. Since software projects are continually changed in nature, earlier projects may not necessarily cover all aspects of a new project when used as a basis for cost estimation. Preliminary software estimation models are constructed on regression analysis or mathematical sources. This paper aims to propose an approach to develop the correctness of software effort and cost estimation using the structure of data set of a web application. All the measures collected, apart from total effort, were introduced using the original web hypermedia applications to ensure that functional measurement types were precisely measured.

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LIST OF ABBREVIATIONS

CCPM Control Conference Payment Method

P/N Participant or Non-author

Y Yes

N No

A/R Accepted or Rejected

OCS Open Conference System

MPS Multiple Paper Submission

PM Participant Management

TC Track Chair

C-C Co-Chair

M Member

CHAPTER I

Introduction

1.1 Introduction

Software cost models and effort approximations support project supervisors to distribute resources, control budgets and agenda and develop modern practices, leading to projects completed on time and within financial plan. If cost and effort are determined suspicious in software projects, suitable occasions can be missed; whereas expectant predictions can be affected to some resource losing. In the context of web development, these issues are also vital and very challenging given that web projects have short schedules and very fluidic opportunity. Since software projects are continually changed in nature, earlier projects may not necessarily cover all aspects of a new project when used as a basis for cost estimation. Preliminary software estimation models are constructed on regression analysis or mathematical sources.

1.2 System Review

In this arena, some applications are run sequentially. Some of them are OpenConf, OCS,EasyChair,CMT etc.Some Modules of this System: Acceptance,Bidding,Discussion Form Fields,CAPTCHA,File Type, Proceedings.
OpenConf: Install system, check configuration and enable modules, open submission, upload and reviewer signup, assign reviewers and advocates, decision and notification.[1] In OpenConf,there has no support to create multi-conference system,payment method ,Website creation,A/R paper download option,speaker scheduling.

OCS(Open Conference System): Open Conference Systems (OCS) is a free Web publishing tool that will create a complete Web presence for your scholarly conference.OCS will allow you to:create a conference web site,compose and send a call for papers,electronically accept paper and abstract submissions,allow paper submitters to edit their work,post conference proceedings and papers in a searchable format,post,if you wish,the original data sets,register participants,integrate post-conference online discussions.[2]
In OCS, there has no support to create IEEE eCopyright,Website creation,A/R paper download option,sponsor tracking and speaker scheduling.

CMT: Microsofts Academic Conference Management Service- The Conference Management Toolkit (CMT) is a free conference management service sponsored by Microsoft Research.CMT is capable of handling the complex workflow of an academic conference including:Customizable paper submission, reviewer,and author feedback forms,Author notification,Review submission etc.[5]
In CMT, there has no support to create multi-conference system,support multiple paper submission in one account,payment method,Website creation,A/R paper download option.
EasyChair: EasyChair is a conference management system that is flexible, easy to use, and has many features to make it suitable for various conference models[3]
In EasyChair, there has no support to create multi-conference system,IEEE eCopyright,payment method,Website creation,A/R paper download option.
Comparison above all systems with ProConf according to free addition.Such as:

Topics	ProConf	OpenConf	OCS	EasyChair	CMT
Make Submission	Y	Y	Y	Y	Y
Allow Multiconference	Y	N	Y	Y	N
Payment System	Y	N	Y	N	N
Create Website	Y	N	Y	N	N
P/N Author Registration	Y	Y	N	N	N
IEEE eCopyright	Y	N	N	N	Y
A/R paper Download option	Y	N	N	N	N
Program Schedule Creation	Y	N	N	N	N
Online Registration	Y	Y	Y	y	Y
Speaker scheduling	Y	N	N	N	N
Multi-track support	Y	N	N	Y	N
MPS in one account	Y	N	N	N	N
Track Assign	Y	N	N	Y	N
PM with RFID	Y	N	N	N	N

Table 1.1: Comparison with Existing System

1.3 Proposed System

Identify these problems, this proposed system target is to overcome those problems. Primarily, The Proposal entitled as ProConf can do Peer-Review, Abstract and Conference Management.ProConf is a free Web publishing tool that will create a complete Web presence for scholarly conference. Proconf covers all aspects of online conference management and publishing, from setting up conference website to operational tasks such as submitting, reviewing, editing, publishing, archiving, and indexing of the conference papers. Proconf also helps to manage the people involved in

organizing a conference, reviewers, and authors,notifying readers and registrants, and assisting with the correspondence. Additionally, Payment system module is added and free as open source to anyone. In existing all conference system there has no concept of RFID. Main featured of proposed system is helpful to program management with RFID technologies.
Below, there is an overview of the process ProConf uses.

Topics	Chair	TC/C-C/M	Author	Reviewer	P/N
Install and Config	Y	N	N	N	N
Create Website	Y	N	N	N	N
Open and Close Submissions	Y	N	N	N	N
Sign-Up	N	Y	Y	Y	Y
Decision and Notification	Y	N	N	N	N
CCPM	Y	N	N	N	N
Assign Reviewers	Y	Y	N	N	N
OCRS	Y	N	N	N	N
Review Submission	N	Y	N	Y	N
PM with RFID	Y	N	N	N	N
Give Comment after review	N	TC-Y	N	N	N

Table 1.2: Proposed System Process

1.4 System overview

ProConf is an open source multi-conference system to manage and publish online conferences. ProConf shields all aspects of available conference management and publishing, from setting up conference website to operational tasks such as submitting, reviewing, editing, publishing, archiving, and indexing of the conference papers. ProConf also helps to manage the people involved in organizing a conference, reviewers and authors, notifying readers and registered participants and assisting with the correspondence. Program Schedule, Conference Paper publish, Conference website development, Payment module etc are the main feature of this proposal. It has been designed to shrink the time and energy fanatical to the secretarial and executive tasks related with supervision of a online conference, while refining the record-keeping and efficiency of editorial processes.
Additionally, ProConf is flexible and scalable. A single installation of ProConf can support the operation of multiple conferences, and multiple years for each conference. Each conference has its own unique URL as well as its own look and feel. ProConf can enable a single director to manage all aspects of a conference. At last, it is an open source helpline for anyone who conduct any online conference.

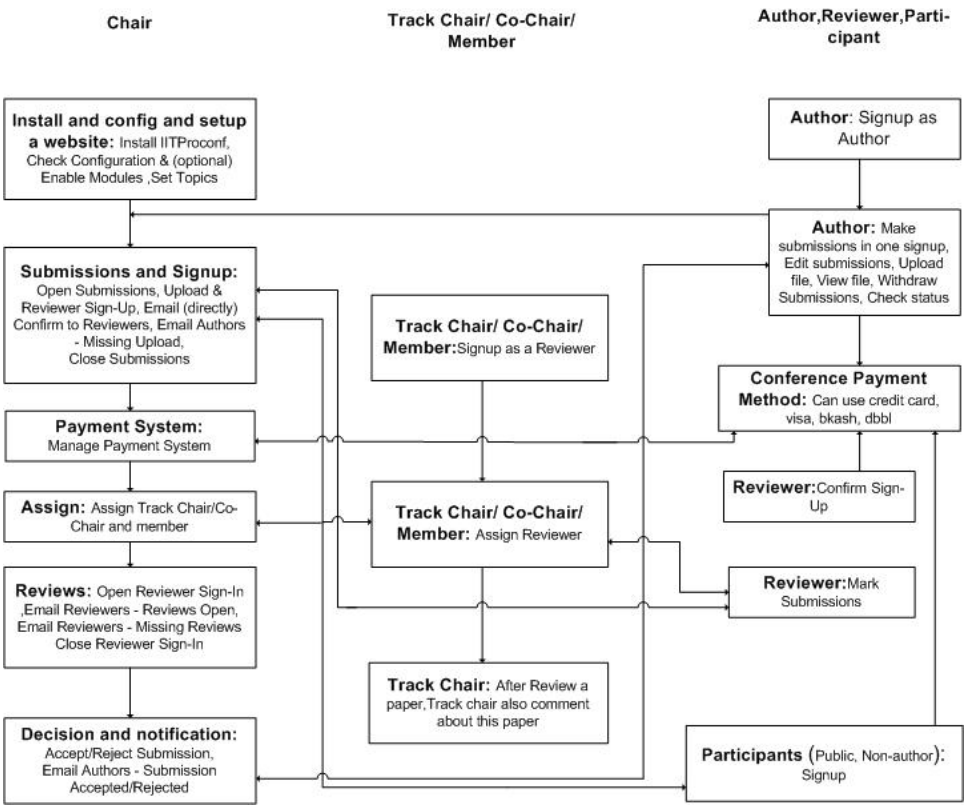

Figure 1.1: System Overview

1.5 Methodology

1. The research approach try to introduce dataset includes basic requirements of projects with some Functional Measurement types and complexity Factor of the software development effort. So, using dataset for evaluating the proposed model is based on Algorithmic model.

2. The second attempt will to create an all requirement dataset based on one of requirement, based on model and algorithm.

   - Estimate criteria for each requirement in dataset, then asserts it into several equal intervals (lengths).
   - Cost Factor matrix development
   - Estimate a corresponding extra linguistic variable for each interval of requirement of Functional Measurement Type.
   - Estimate Project management software primary functions

1.6 Socio-Economic Importance

- Help supervisor to manage resources, control budgets and agenda and develop modern practices.
- Help Project Managers to complete on time and within financial plan.
- Make better relationship between Software clients and Project Managers & Developers.
- Financial Report generate for Clients satisfaction.

1.7 Time Frame

Table 1.3: Time Frame (March 2015 - December 2015)

Activity	2015									
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Preparations & Study										
Activity 1.1 Explore Software Cost And Effort Estimation Models										
Activity 1.2 Development of dataset for Software Cost										
Activity 1.3 Data Collection form Industrial Mentor										
Development of Approach										
Activity 2.1 Algorithm Development for Actual & Estimate Software Cost & Effort										
Activity 2.2 Find out Project management software Cost & Effort										
Activity 2.3 Differentiate Actual & Estimated Software Effort and Cost										

Table 1.4: Time Frame (January 2016 - June 2016)

Activity	2016					
	Jan	Feb	Mar	Apr	May	Jun
Monitoring and evaluation						
Activity 3.1 Prepare main case studies to evaluate result						
Activity 3.2 Assessing the accuracy of estimates						
Activity 3.3 Result Analysis & Report Generate on the basis of Case Studies						

CHAPTER II

System Process Diagram

2.1 Sequence Diagram

ProConf helps to manage the people involved in organizing a conference,track chair or co-chair or member,reviewers and authors, notifying readers and registered participants and assisting with the correspondence.In sequence diagram,at first chair create conference website,author signup page,open or close submission,sent email to the people involved in organizing a conference. Author making a submission when chair open submission,upload a file in one account.Track chair assign reviewer,assign paper,gives comment about this paper after reviews.Chair and Track chair or co-chair show all submitted paper.Reviewer reviews paper,give marks assigned paper.Chair accept or reject paper after reviews and sent notification,email to author.

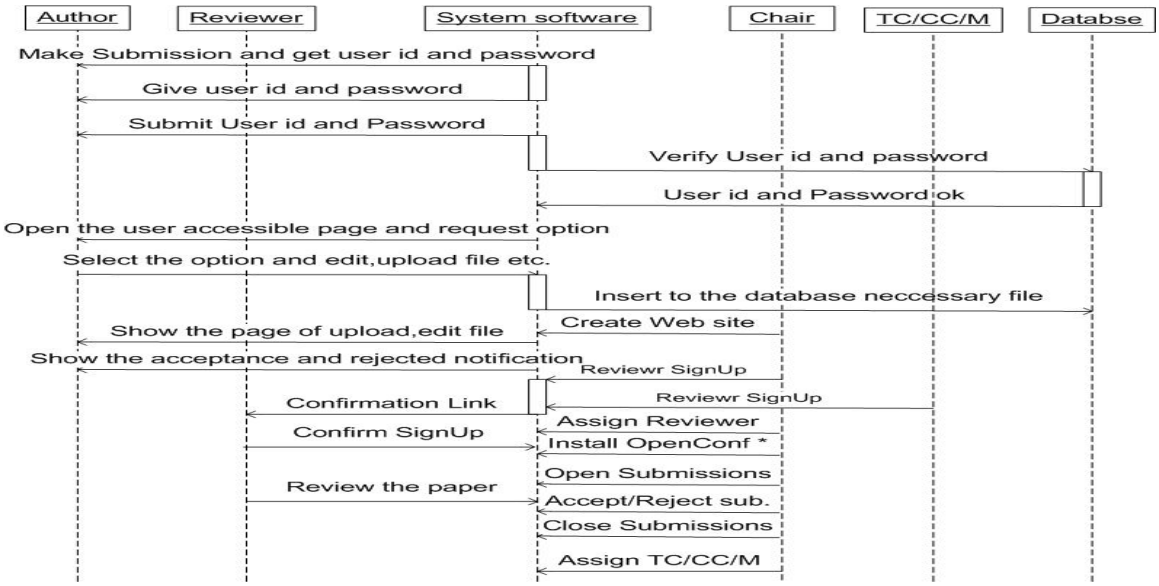

Figure 2.1: Sequence Diagram

2.2 Activity Diagram

2.2.1 Activity Diagram of Chairs

Chair install this system,create conference website,assign reviewer,assign track chair or co-chair or member,accept or reject paper,sent email to the people involved in organizing a conference.

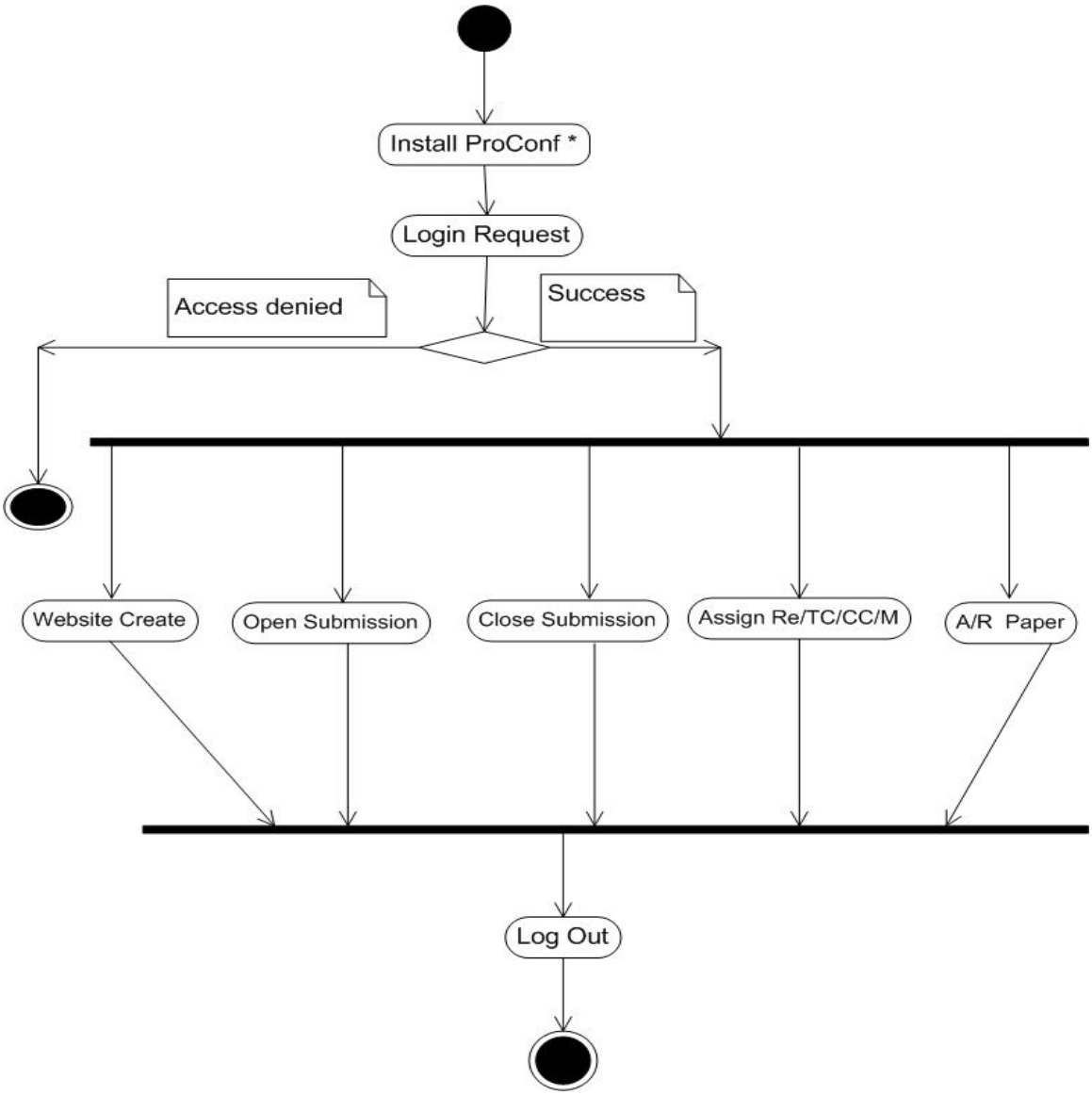

Figure 2.2: Activity diagram of chairs

2.2.2 Activity Diagram of Authors

Author making a submission,upload a file,edit file in one account.There will be different color exist to easily identify if file not upload,accept or reject paper,pending paper.

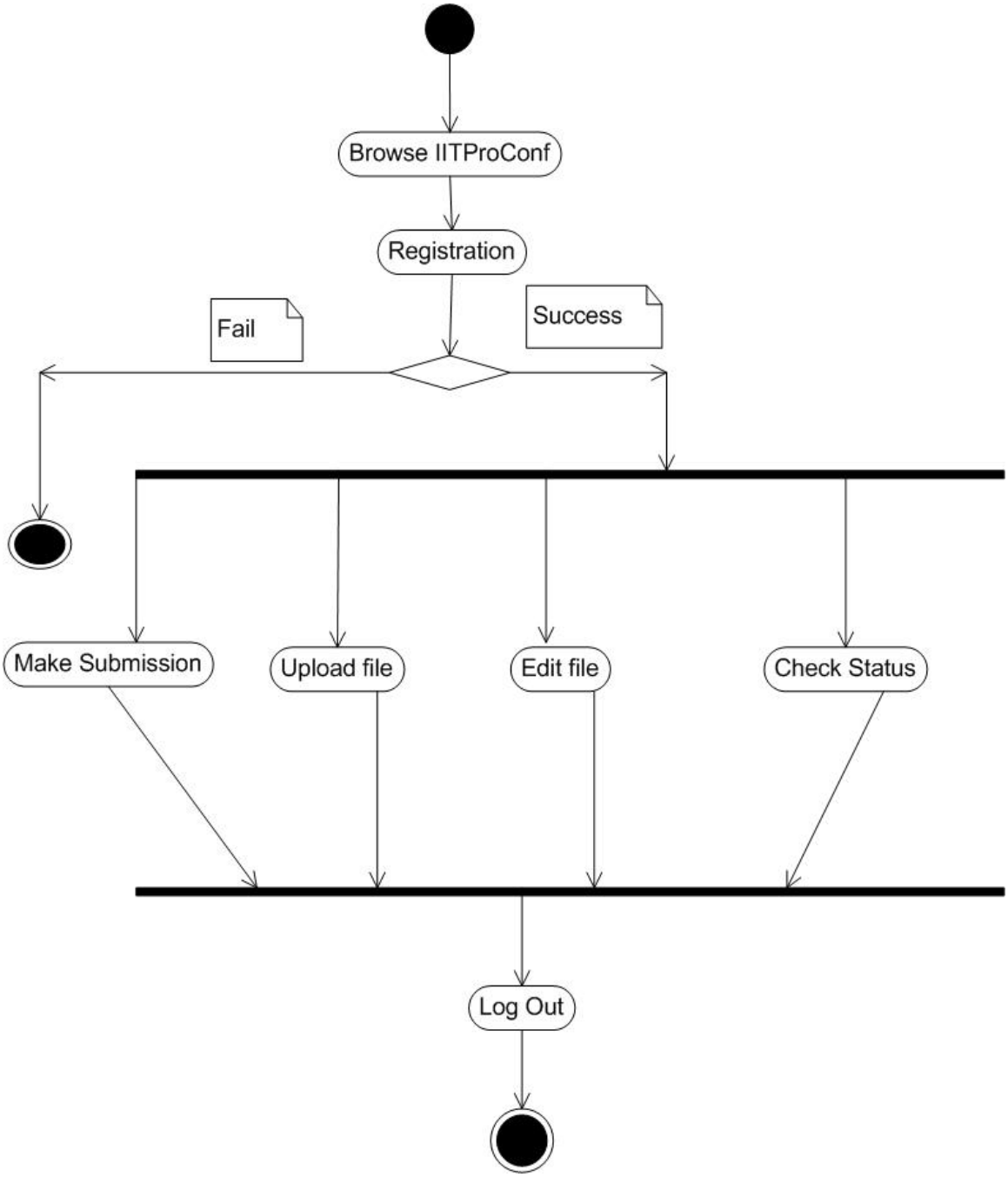

Figure 2.3: Activity diagram of authors

2.2.3 Activity Diagram of Track Chairs or Co-Chair

Track chair assign reviewer,suggest accept or reject paper,sent email to the people involved in organizing a conference.

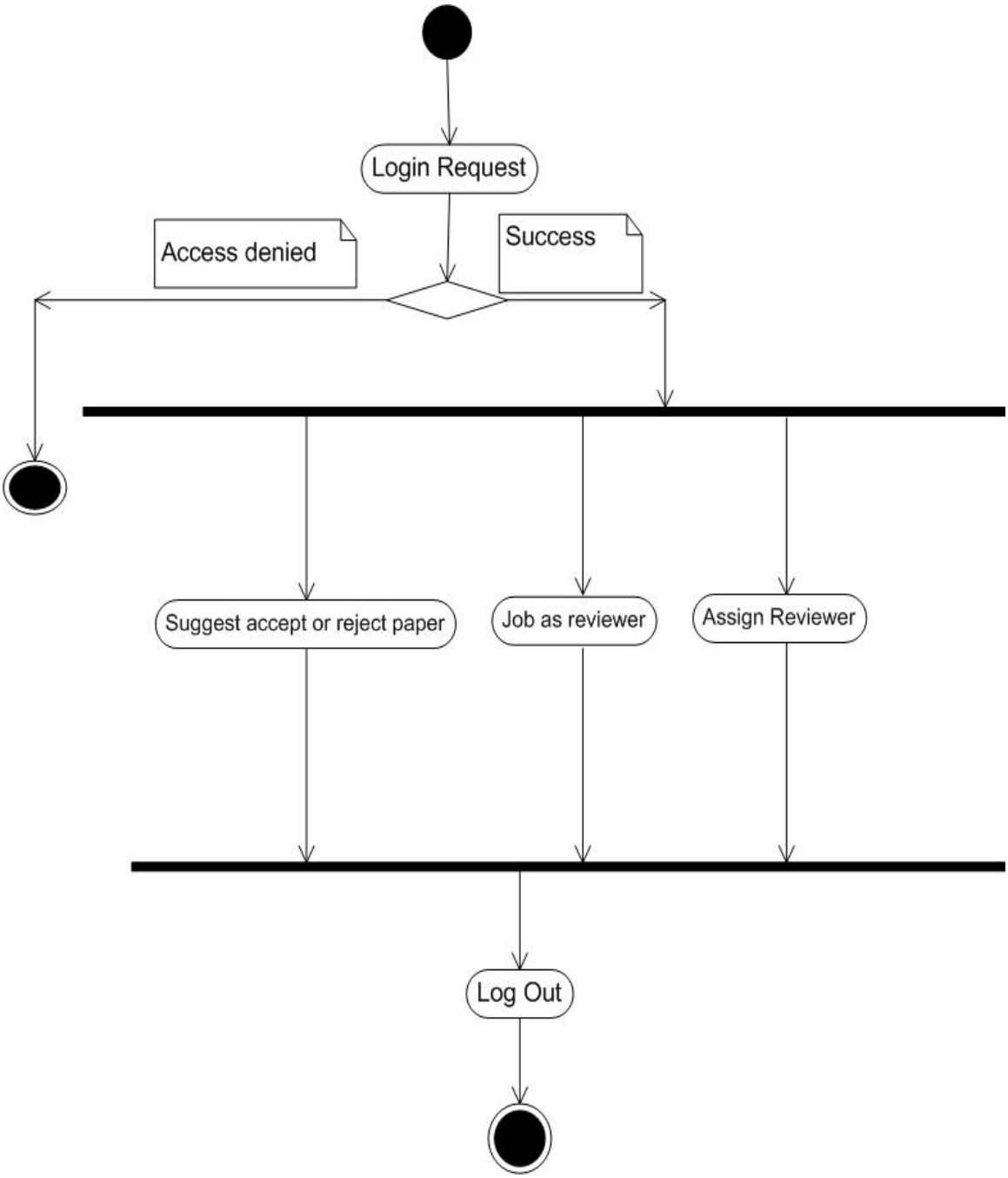

Figure 2.4: Activity diagram of track chairs or co-chair

2.3 Activity Diagram of Reviewer

Reviewer reviews paper,give marks assigned paper.

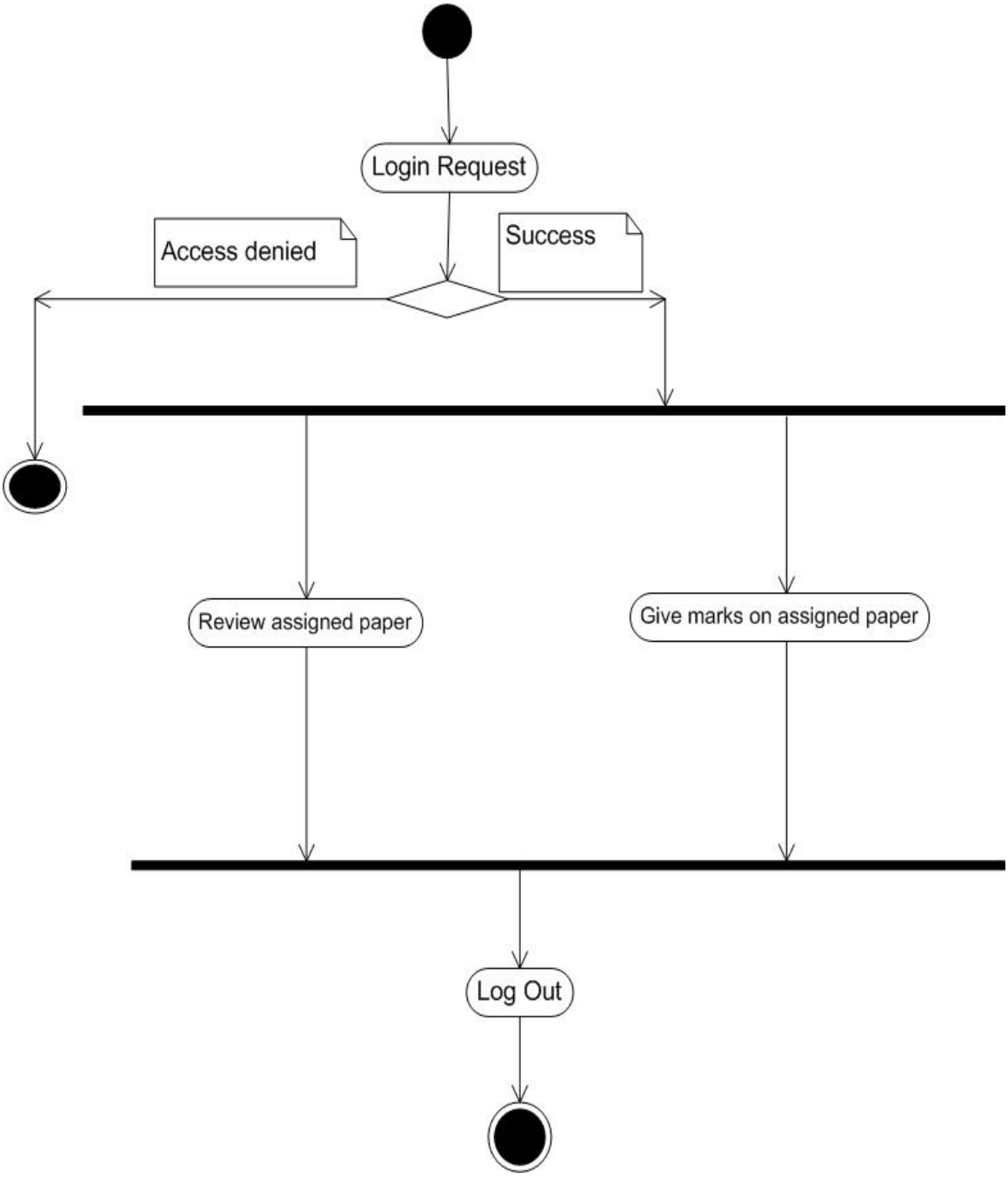

Figure 2.5: Activity Diagram of Reviewer

CHAPTER III

Implementation

3.1 Requirements

The following requirements are applicable if you choose to run ProConf on your own server.

- Apache or other* HTTP server
- PHP version 5.3.7 or newer, –with-mysqli –with-mcrypt.[4]
- MySQL or MariaDB version 5 or newer
- 15 MB of disk space for the OpenConf software, plus additional space for submission files
- 1 MB of database space per 100 submissions (actual amount will vary based on modules installed, number of reviewers, and other factors)
- The hosting account (web server) will also require:
- Create/write access to IITProConf/config.php and IITProConf /data/*
- MySQL privileges to: ALTER, CREATE, DELETE, DROP, INSERT, SELECT, TRUNCATE, UPDATE

3.2 Conference Website

When Chair install this system then a website will be created.It is easy to use for chair.Chair can create unlimited menu,dynamically news update,change important date etc.All information for conference will be here.Here some option exist that means make submission,scope and track,news,important date,registration,committees,best paper award etc.Conference website will be helpful for authors,reviewer,chair,track chair.

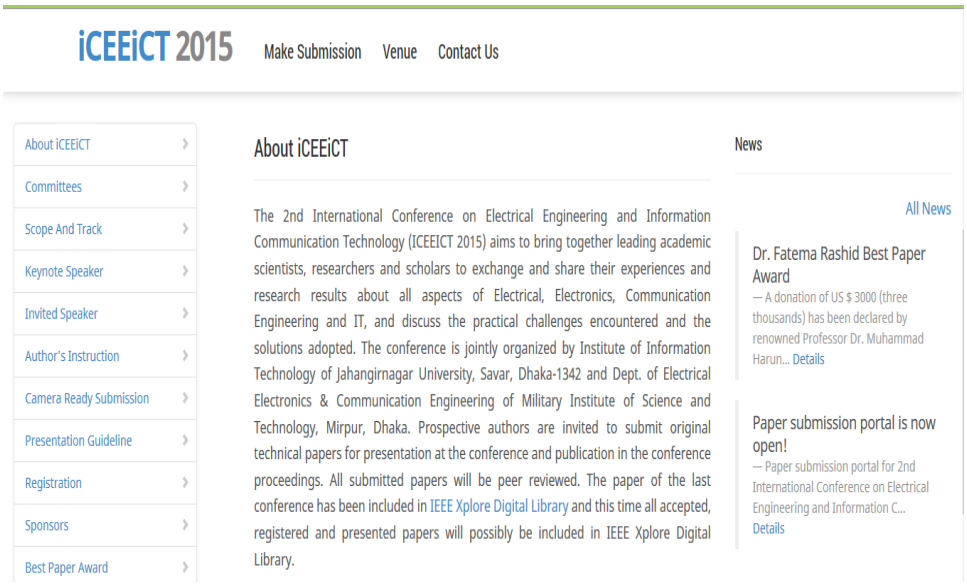

Figure 3.1: Conference website

3.3 Authors Section

3.3.1 Author make a submission

In this section author make a submission easily.He/she will make a unlimited submission in one account.After make a submission, he/she will upload valuable research paper.

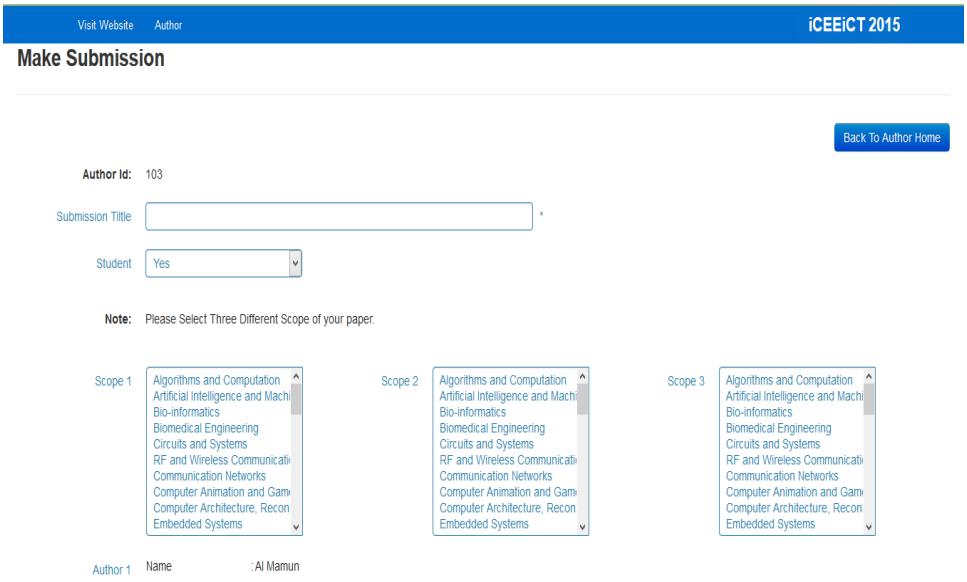

Figure 3.2: Author make a submission

3.3.2 Author home page after submission

After make a submission then he/she will get a home page.There will be different color exist to easily identify if file not upload,accept or reject paper,pending paper.If chair accept or reject a paper,author will get a notification and a email.If a paper will be accept then author making a camera ready submission.It is very helpful for author for make a submission,upload file,update profile,email chair etc.

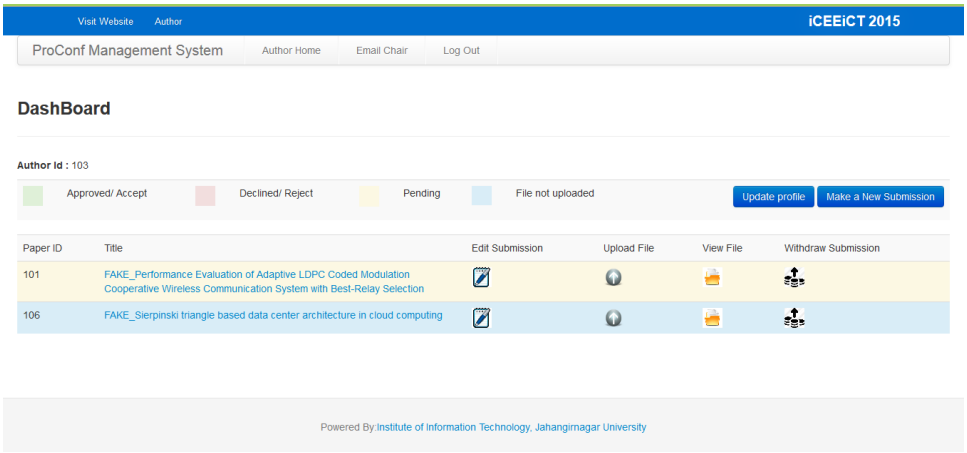

Figure 3.3: Author home page

3.4 Reviewer home page

If Chair sign up a reviewer then he/she will get a email for confirmation link.After click a confirmation link as a reviewer,he/she will get a home page.If Chair assign paper to reviewer,then reviewer will see assign paper.

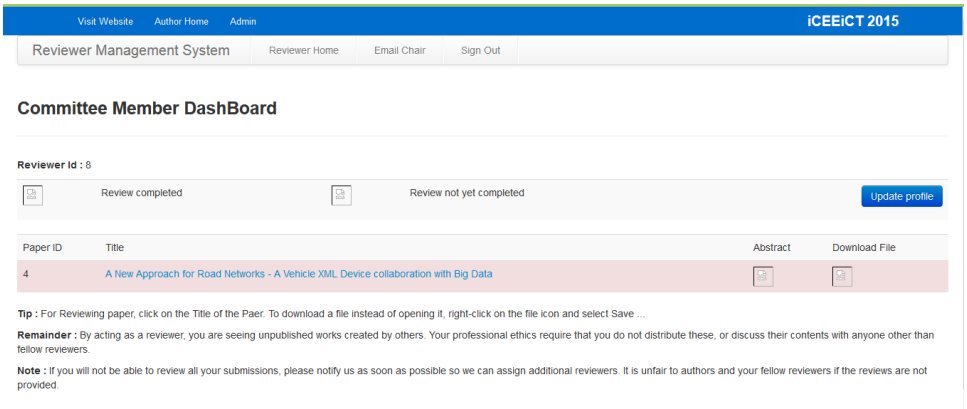

Figure 3.4: Reviewer dashboard

3.5 Conference Chair Home Page

3.5.1 Show all paper

In conference chair home page,chair show the all uploaded paper.There will be different color exist to easily identify if file uploaded or not.

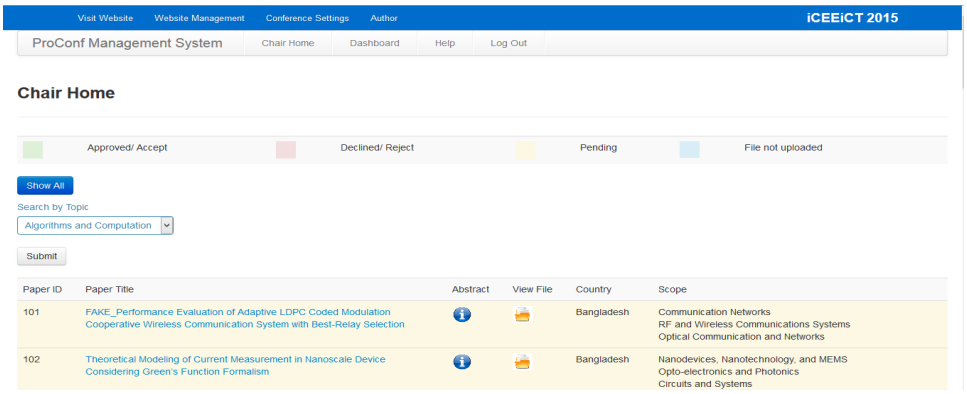

Figure 3.5: Chair home page

3.5.2 DashBoard

In conference chair dashboard,chair manage the conference website,pear to pear review system,assign reviewer,accept or reject paper,assign track chair or co-chair or member etc.

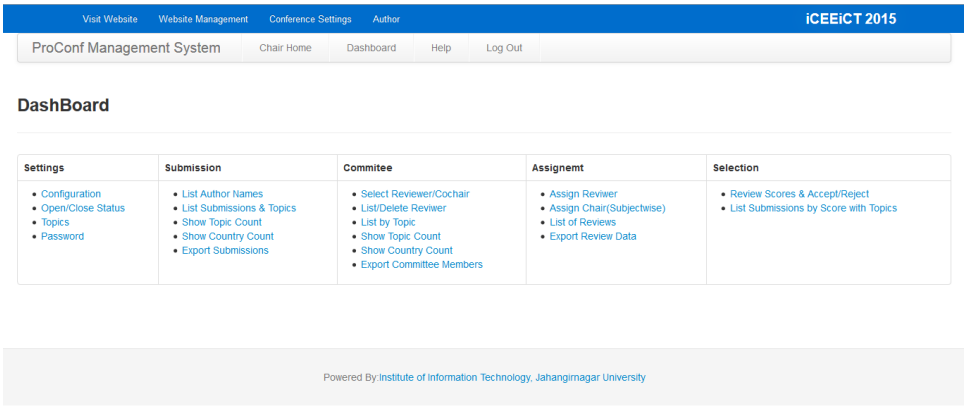

Figure 3.6: Configuration home page

CHAPTER IV

Conclusion and Future Plan

This Thesis will be assessed the structure of research on effort and cost estimation models for web applications by examining the techniques that were castoff to shape approach, the datasets that will castoff and the research types will be engaged. This will be done in the environment of promoting effort and cost estimation practices from traditional software development.

Although many revisions have been accompanied by effort estimation models for web applications, There is no strong suggestion that there is a certified method or a set of verified approaches for estimating the effort and cost of web applications. All of the performances will be used are tailored forms of systems taken from traditional software engineering.

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