

PAYROLL SYSTEM

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BitPAYE

Introduction

BitPAYE project propose an innovative web-based software solution for payroll system management.

HR activities and fintech solutions are integrated.

BitPAYE address to any organisation.

Payroll system management offer better understanding of finance and HR technology.

BitPAYE provides numerous built-in roles customized to client requirements.

Project Objective

BitPAYE aim is to create a system with modern facilities that improve HR and business performance:

- User mode authentication
- Payslip self check features
- Streamline payments, deductions, benefits automatically
- Generating timely reports and statistics.

BitPAYE is designed to be compatible to any IT environments and requires minimal effort to integrate within the organizational system.

BitPaye

Ion Gabriel Matei

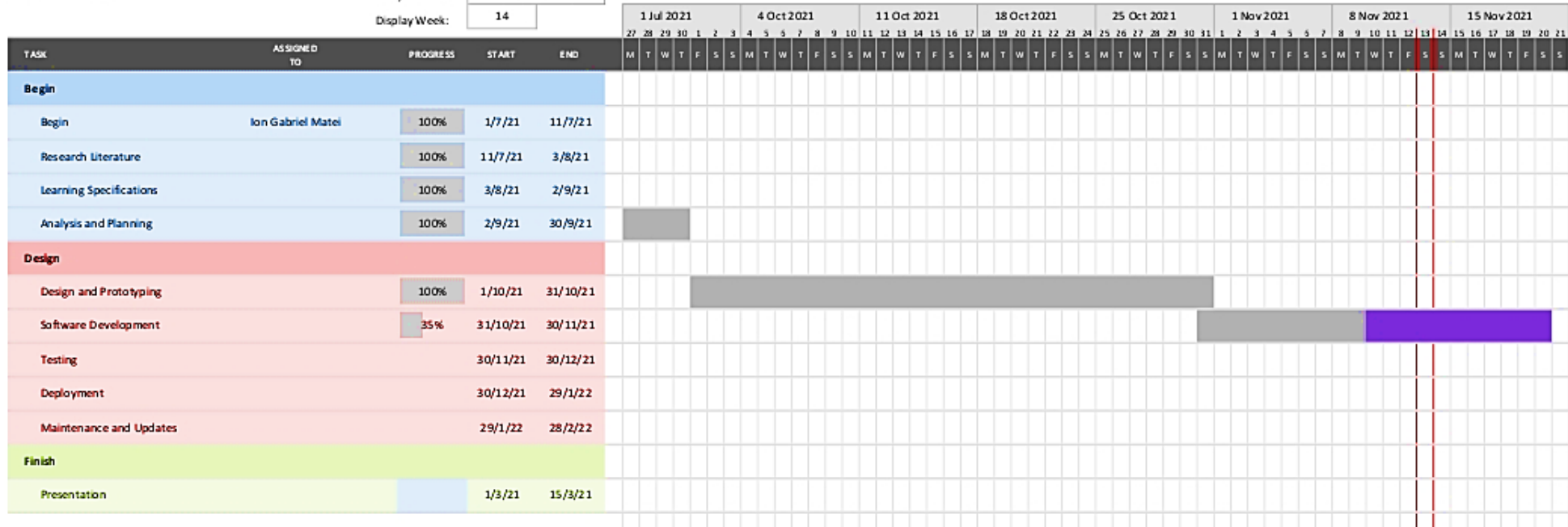
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Project Start:

Thu, 1/7/21

Display Week:

14



Gantt Chart

Current Phases: Software Development-Coding

Literature Review

Payroll Systems

Top payroll software in UK:

Sage Business Cloud

KashFlow

Intuit

HMRC Basic PAYE

Compensation facilities or “rollback”, shift allowance and annual leave payments are big challenge for payroll systems and business and there is no integrated solution to answer to this matters.

Software engineering, design and implementation of web -based applications used to develop existing applications are more impacted by technology and business evolution and there is always a demand for new and more automatized solutions [1],[2].

Literature Review

Software development life cycle (LDSC)

SDLC is defined as the life cycle through which application software is born [2].

The four stages of basic waterfall model are:

Requirements Analysis and Definition;

Systems and Program Design;

Coding where the design is implemented;

Validation and Verification at various levels [3],[4].

Waterfall, prototyping, iterative and incremental development, spiral development, rapid application development, extreme programming, agile are various types used methodologies [3].

Hypertext Preprocessor (PHP)

PHP is an open-source scripting language used for general purpose and preferred for web development[5],[6].

Pay As You Earn known as PAYE reflects: Income Tax (IT), Pay Related Social Insurance (PRSI) and Universal Social Charge (USC) and the amount deducted to Revenue[7].

Tax office is offering support for compensation and money recovery when payroll systems are failing to deliver accurate payments.

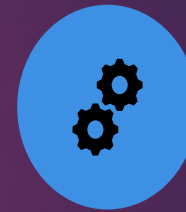
Methodology



Analysis and
Definition
Requirements



System and
Program Design



Coding



Validation and
Verification



Implementation



Waterfall Model
In use [2].

Analysis

Global payroll solutions: Sage Business Cloud, KashFlow, Intuit, HMRC Basic PAYE



System gives to employee's possibility of keeping records of their salaries, progression and rewards, see reports and schedules



Basic information of the employee when register account.

Edit, search and update employee information, validating data by admin

Print out pay-slips

Edit and deliver reports.



Requirements:

Pre-development activities, data collection, payroll processing, and payroll tax accounting and filing, HR requirements.

Development - Tools & Technics

PHP

Built-in database connection module, library support, run on many platforms, open-source programming language.

MySQL

Open-source database, support scripting language, stored procedures, triggers, SQL and user functions, support for various drivers (.NET, PHP)

XAMPP

Provides the Apache web server, MySQL database, PhP command-line executables and Apache modules all in one package. No configuration when integrate Php with MySQL.

Notepad++

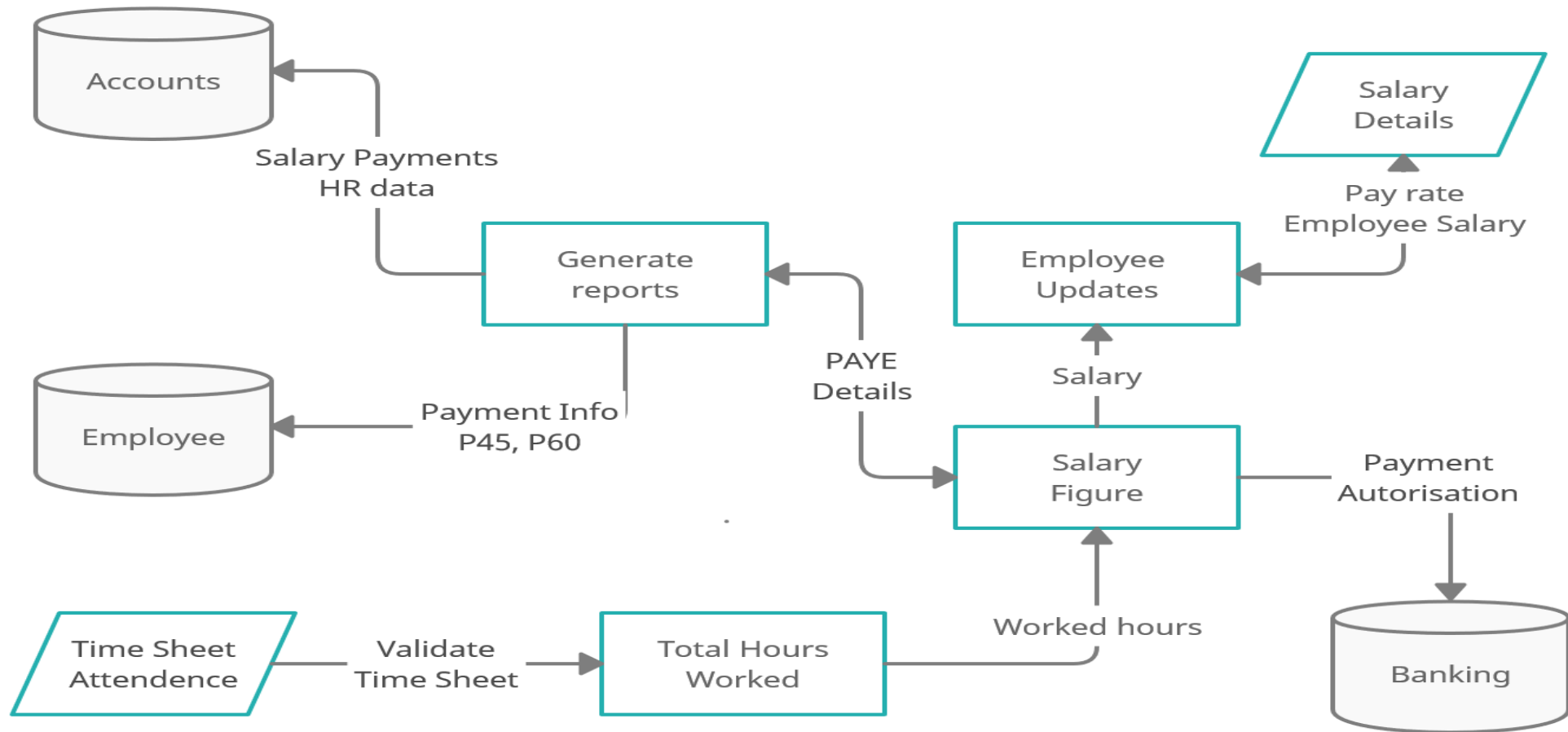
Text and source code editor for use with Microsoft Windows

ClickApps

Project management platform, offers features to build work environment.

Design

► Data Flow Diagram



Conclusions

- ▶ BitPAYE facilitate operational mode of HR and financial activities and eliminate manual inputting errors.
- ▶ Employees connect with their own database records via personal accounts.
- ▶ Productivity and traceability improves within the organization by introducing automatized functions and allowing more time for HR and financial staff to concentrates on their work-specific activities.

References

Payroll Systems

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- ▶ [2] S.L. Pfleeger, "Software Engineering: Theory and Practice", Prentice-Hall, 2006

LDSC Research

- ▶ [3] Davis N. Secure Software Development Life Cycle Processes. Carnegie-Mellon Univ. Pittsburgh, PA, Software, Engineering Inst., 2013.
- ▶ [4] Bokhari MU, Siddiqui ST. TSSR: a proposed tool for secure software requirement management. International Journal of Information Technology and Computer Science (IJITCS) 2014;7(1):1.

Development

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- ▶ [6] W3Schools Online Web Tutorials, PHP Tutorial , 2021, Online: www.w3schools.com.
- ▶ [7] Offutt, Jeff. Quality attributes of web software applications. IEEE software19.2 (2002): 25–32