# ONLINE JOB PORTAL

BY

PERPETUAL NKATHA

KBT/G/004/16

THIS SYSTEM PROJECT PROPOSAL HAS BEEN SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE IN BACHELOR OF BUSINESS INFORMATION TECHNOLOGY IN THE SCHOOL OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY AT KIRIRI WOMEN’S UNIVERSITY OF SCIENCE AND TECHNOLOGY.

NOVEMBER 2018

# DECLARATION

This project proposal is my original work and has not been submitted to any institution of higher learning for the award of diploma or degree.

Signature……………………………………………………………….Date…………………………………………………………

PERPETUAL NKATHA

KBT/G/004/16

APPROVAL

The research has been submitted with my approval as the official university supervisor

SUPERVISOR; ……………………………

Signature…………………………………………. Date…………………………………………….

.

# ACKNOWELEGEMENT

I express my thanks and full hearted gratitude to my respected to my teacher, supervisor and guide of my project Mr. Adrian Bosire of department of computer science and information technology, Kiriri University of science and technology, for his guidance and entire support in completing this project successfully. I am very much thankful to him for the constant encouragement and continuous inspiration that he has given to me.

I convey my real sense of gratitude and thankfulness to my family members and all friends for their unconditional support and encouragement during my project work without which I would hardly be capable of producing this huge work.

Finally, I express my gratitude to the almighty God the most beneficent and the most merciful, for granting me the opportunity to write this project proposal.

# DEDICATION

I dedicate this work to my parents for their support throughout.

# ABSTRACT

Finding jobs that best suits the interests and skill set is quite a challenging task for the job seekers. The difficulties arise from not having proper knowledge on the organization’s objective, their work culture and current job openings. In addition, finding the right candidate with desired qualifications to fill their current job openings is an important task for the recruiters of any organization. Online Job Search Portals have certainly made job seeking convenient on both sides. Job Portal is the solution where recruiter as well as the job seeker meets aiming at fulfilling their individual requirement. They are the cheapest as well as the fastest source of communication reaching wide range of audience on just a single click irrespective of their geographical distance. The web application “Job Search Portal” provides an easy and convenient search application for the job seekers to find their desired jobs and for the recruiters to find the right candidate. Job seekers from any background can search for the current job openings. Job seekers can register withthe application and update their details and skill set. They can search for available jobs and apply to their desired positions. Android, being open source has already made its mark in the mobile application development. To make things handy, the user functionalities are developed as an Android application. Employer can register with the application and posts their current openings. They can view the Job applicants and can screen them according to the best fit. Users can provide a review about an organization and share their interview experience, which can be viewed by the Employers

# ABBREVIATIONS

SDLC system development life cycle

URL universal resources locater

DB database

PID project initiation document

DDS design document specification

SOW statement of work

PHP

MS Microsoft

WWW World Wide Web

OS operating system

HTTP hypertext transfer protocol

HTML

CPU central processing unit

Contents

[ONLINE JOB PORTAL i](#_Toc531163573)

[DECLARATION ii](#_Toc531163574)

[ACKNOWELEGEMENT iii](#_Toc531163575)

[DEDICATION iv](#_Toc531163576)

[ABSTRACT v](#_Toc531163577)

[ABBREVIATIONS vi](#_Toc531163578)

[CHAPTER ONE 1](#_Toc531163579)

[INTRODUCTION 1](#_Toc531163580)

[1.1 Background of the study 1](#_Toc531163581)

[1.2 Statement of the problems 2](#_Toc531163582)

[1.3 Objectives 2](#_Toc531163583)

[1.4 justification 3](#_Toc531163584)

[1.5 scope 3](#_Toc531163585)

[Chapter two: 5](#_Toc531163586)

[Literature review 5](#_Toc531163587)

[2.1 introduction 5](#_Toc531163588)

[2.2 The job search engines/employment websites 5](#_Toc531163589)

[2.3 Social websites based advertisement 6](#_Toc531163590)

[2.4 Social media in a job search 6](#_Toc531163591)

[2.5 Newspaper and advertisement 7](#_Toc531163592)

[2.6 Postings to the local employment office and employment agency 8](#_Toc531163593)

[CHAPTER THREE 10](#_Toc531163594)

[METHODOLOGY 10](#_Toc531163595)

[3.1 introduction 10](#_Toc531163596)

[3.2 project design process 11](#_Toc531163597)

[3.3 tools and techniques 19](#_Toc531163598)

[3.4 system models 23](#_Toc531163599)

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

A job portal is a modern name for an online job board that helps the employers to find their candidates and also helps the job seekers to find the jobs which are suitable for them. This online job portals offer a wide range of in different areas. The government agencies, on profit organizations, universities and private businesses have created the online job portals to enable the job seekers access the organizations website.al tough it might not fully satisfy the job seekers and the job posters completely. Normally many companies waste their money and valuable time when finding the right candidates for the jobs. Although some site provide specific information of CVs and how to write them, they perform better in interviews and the topics preferred by the job seeker, the face difficulties in achieving the communication and interactions between the job seekers and the job posters.

In this project I have implemented an open source software tool for a job portal system for companies, agencies and freelance job portal developers. It provides a platform to start their own online web based job portal system where the employers and the job seekers can interact effectively. When a company wants to start their own online job portal they have to hire employees to develop system for their requirement or they have to but existing commercial job portals with limited functionalities .through this job portal and recruitment system, companies do noted to hire several employees to develop entire system. At the same time, there is no time delay to start their web based system because it is provided online video based training for developers. By using these demos, they can modify the system and it will be more advantage if they have basic knowledge about web based system development. main key features in the system is job posting ,view the job, apply for the job, interview scheduling, job poster-job seeker interaction, admin based job or job seeker/job poster administration and supporting system by providing multimedia based video explanations and code level explanations. Here, there the admin of the system and there several job seekers and job seekers involved together. The system will involve the in real times as well as able to customize according to the requirements of a company;

Job Search Portal is a web application, which serves jobseekers to find available job vacancies and Employers to identify eligible job seekers with the prospect of selecting the most qualified candidates. The only way to select best-qualified candidate is to have a pool of eligible applicants, which is possible by drawing the interest of individuals in the market. Job search portals best serve this purpose. E-recruitment has become the standard means for employers and job seekers to meet their respective objectives. The traditional methods for recruitment includes Job fairs, University career employment services, Employee referrals, advertising in the newspapers, televisions etc. With the advancement in technology and growth of internet usage, the e-recruitment has revolutionized the way organizations hire and candidates search for jobs. With the Online Job search portals, the recruitment process is speeded up at every stage from job postings, to receiving applications from candidates, interviewing process. The cost of searching/posting jobs will be much less compared to the traditional way of advertising. Job search portal stands as an effective means for Employers to outline the job vacancies, responsibilities and qualifications to attract jobseekers. Using the portal jobseekers can extensively search for jobs in companies, organizations and regions they may otherwise have not learnt. In addition, candidates/Employers can write a review about an organization, which might help them to change.

### 1.2 Statement of the problems

Our existing system is work fully manually.ϖ In a manual system Jobseeker can all work on paper so it is very time consuming process.ϖ When new member are include then paper work will be automatically increased.ϖ All job searches manually because the companies are connected will admin.ϖThe Jobseeker who want to apply for specific Job. It’s hard to find as per specification.ϖ

### 1.3 Objectives

#### 1.3.1 General Objective

The main objective of the project is to change manual way of operation of the job application to an automatic system. This system will help to reduce the time required during the job search process.it will help the employees and the employers to reduce the human resources needed in a company. The job portal also provides flexibility to the job seekers

#### 1.3.2 Specific Objectives

.

To analyze the system

To design the system

To develop system

To evaluate the system

To test and implement the system

### 1.4 justification

He online job portal creates a platform to the jobseekers for them to find the fitting job opportunities that suites their qualifications. It is also developed to help the companies in improving its standards through the use of computerized systems rather than manual. The main aim of developing this system is to make job searching more easy and efficient to the jobseekers and the employers.it is a primary source of talent search for the recruiters. The job seekers are also able know the vacancies available at single point. The online job portal has a connecter between the employers and the jobseekers. The job portals have become very good communication channels because they reach a wide audience worldwide. They are used also in marketing various companies which might not be known if not through this use of job portal. The job portals also help in saving time and human resources since it do not require many employees, it only requires an administrator.

### 1.5 scope

The scope of the online job portal includes.

The online job portal system that is to be developed provides the members with jobs information, online applying for jobs and many other facilities. The basic scope of the project is given under, job seekers, recruiters, administrator’s portal.

#### Limitations

Only attract job seekers and not actual difference makers. The best candidates aren’t looking for a job they are happy doing what they are doing

Miss out on great hires because your recruiter is tunneled in on only interviewing candidates with the right keywords in their resume

Recruiters waste a lot of time with unqualified candidates

The barrier to entry is too low and anybody can apply to your job.

Internet-only job hunting does not give you access to many of the jobs that are available in your field.

Assumptions

There are a number of modules which that will provide standardized ways of job postings, sorting out the resume according to qualifications and other requirements like age a ,experience, positions, gender and knowledge, there is the collection of resumes from the job seekers also. The admin and the users should be able to interact with the system effectively and error tolerant system.

# Chapter two:

## Literature review

### 2.1 introduction

It is concerned with the critical review of the related systems and technologies the required implementation.it is focused on the justification and evaluation of the recruitment process and technology selection. There are several systems which are related to the online job portal. Some of the systems are operated manually. The systems are as follows, the job search engines/job websites, social media, newspapers and advertisement, local employment agencies and the social websites and advertisements. This systems show the job vacancies available, the qualifications which a candidate needs to apply for the jobs and also how to apply for the jobs. Like the local employment agencies shows the jobs which are available local. People who are not able to access the social media and other job websites can access their local employment agencies easily and at any time. Most of this systems are traditional systems.

### 2.2 The job search engines/employment websites

These are websites which covers the employment and careers. The employers can post jobs and their requirements. There are other sites that post the job reviews and, job seekers advice and the careers, they also describe the kind of employees that are required. (Maynard, M. T. (2018, July )The kind of employees available and their descriptions. The job seekers have to apply and submit their application for the job they want or they have the qualifications required.

The website were developed by non-profit organizations backed up by forty major corporations .this enabled the job seekers and employees tin post their resumes and allow recruits to view their openings. an online employment website, founded in 1995 and with offices in the United States, Canada, Europe and Asia. In 2008, it had the largest market share among online employment websites in the United States, where it was founded. CareerBuilder.com provides labor market intelligence, talent management software, and other recruitment solutions, including online career search services for more than 1,900 partners as of March 2008, including 140 newspapers and portals such as AOL and MSN.

The achievements of this job search engines is that it has improved and made its easier for the job seekers and the employers. They provide many opportunities to the job seekers with their qualifications.

The job website serve a large audiences. Various geographies and different areas of specifications.

CareerBuilder sites are found in 23 countries outside the U.S., and has a presence in over 60 markets. In 2011, CareerBuilder acquired Jobs Central in Singapore and JobScout24 Germany. In 2014, CareerBuilder acquired recruiting technology company Broad bean in the U.K

### 2.3 Social websites based advertisement

Many social websites such the news sites, financial sites and the games site became known and popular and so many people millions of people started using them widely. The user used the sites at daily basis. The websites used the banners ads and text ads for the advertising purposes. This platform combines recent targeting options to make a detailed target team identification possible. McDonald, P., & Thompson, P. (2016). The advertisement are distributed to the people involved based on the information collected from the target team profiles.

THE BENEFITS

It generates leads which enables the campaign to be monitored effectively

It increases your visibility since your post appears at the top creating more awareness.

It is able to reach the engaged audience this is because many people use the social media several times a day.

It targets the specific audiences because the people there post their profiles which tell a lot about them, the business use the information to know the interests of their target. McDonald, P., & Thompson, P. (2016).

The social media advertisement increase the brand awareness and customer loyalty.

It increases flexibility.

### 2.4 Social media in a job search

Social media is growing fast. Employees find the qualified applicants in the social media platforms. McDonald, P., & Thompson, P. (2016). The social media is fast and a cheaper way of finding the desired candidates’ that the use of the job websites. The social media is accessed by a large number of users hence it is easy to find a candidate from the many users companies, industries and recruiting agencies are also using the social media to conduct its activities and this helps them to gain a competitive advantage over their competitors.. Most of the companies and agencies own their own social media accounts.

There are many advantages of using the social media as a search engine

The job visibility increases

The candidates are many and highly qualified McDonald, P., & Thompson, P. (2016).

There is brand awareness of better employers

It provides a target for the vacancies

The time of hiring becomes shorter

It helps reduce the cost

### 2.5 Newspaper and advertisement

Advertisement is in many forms and newspaper is one of them.( McDonald, at, or. (2016). Many people use the internet to seek use the job posting and career websites to search for the jobs they want. The newspapers cover a wide high and low people it has a long history since it covers a large area .newspaper are highly detailed that it provide the required information by the job seekers. Many job seekers use the local newspaper to learn about the available jobs and vacancies in different areas of their qualifications. Some companies may not post their jobs online instead they might prefer using the newspapers for their advertisement. The advertisement will reach the intended people regardless of the regional differences. The local businesses will also what to post their advertisements to their local newspapers. This helps them to focus on a particular area. If you have local newspaper it would be easier to get the advertisement. Which be a bit harder while using the online for the advertisement. This can help to identify the companies which had a bad track record and job seeker can avoid applying for the jobs. McDonald, P., & Thompson, P. (2016)..

BENEFITS OF NEWSPAPER ADS

1. They a wide audience

They are millions of people who use the daily newspapers. The users are diverse in the demographic profile and use the newspapers as a channel of information in many ways.

2. They are affordable

There many media houses to choose from when someone want to advertise his or a business/

The person has to consider which agency is favorable to his/ her business interns of the advertising.

3. They are trustworthy

The newspapers are trustworthy according to the research that was conducted recently compared to online and the radio.

4. Digital

This allow digital targeting as well as digital advertising

5. Targeted

The newspapers reach the targeted audience where it covers the high and low people in the society.

6. Flexible

If a business decides to change some concepts of their advertisement, the newspapers can be easily changed unlike other mediums.

7. They are engaging

This is medium with less distractions and its audiences find it engaging when compared to other mediums.

### 2.6 Postings to the local employment office and employment agency

The employment agency is used by the local people where the job seekers are able to view the job postings in their areas.at the employment agency the job seekers are always their waiting to be recruited by the employees for the available or the vacant jobs advertised by that agency the agency use paperwork which is very tiresome and requires a lot of work to be done. They can also use the computerized system of work to recruit their candidates. .The use of employment agency is affordable to many companies.(Thompson, at, or 2016) The employment agencies are able to find many types of employees around the area. Using the local employment agency is cheap to the companies compared to other methods like the use of websites. The job agencies cover a small area.

# CHAPTER THREE

## METHODOLOGY

### 3.1 introduction

There methods that are used in the system development process, to analyze the cost estimates time and other resources required. There is the feasibility study and requirement analysis.

Feasibility study

The aim of the feasibility study is to identify the weaknesses and the strengths the existing system and the threats and opportunities that are presented in the environment, if the resources are available to carry out the project and the chances of success.it helps in the cost estimation and the value attained if the project is undergone.

Requirement analysis and specification

it is a phase where the developer tries to understand the customers requirement and to systematically organize the specifications into a specification document. Requirement gathering and analysis requirement specification is one of the activity that is carried out during the requirement analysis and specification .the activity analysis the data which is gathered get a clear understanding of the system which is to be developed requirement analysis and specification also identifies the problem of inconsistency, ambiguity and incompleteness.

Technical feasibility

This feasibility is carried out to show if the company has got the required hardware, software, and if the expertise are available to handle the project up to its completion

Economic feasibility.

This is also known has the cost/ benefits analysis. It aids in evaluating the effectiveness of a new system. The cost of the new system should not outweigh the benefits. If the benefit outweighs the cost a decision is made to design and implement the new system.

Legal feasibility

The system should not conflict with the legal requirements.

Operational feasibility

The system should be development to fit with the skills avaible.it should be simple, easy and user friendly. It should also satisfy the needs of the company and other users.

Schedule feasibility

Most projects fail because they take a long time to be completed. Time should be estimated for which the system will take to be developed. In case it fails to complete by the time estimated some methods should be used like the payback period. This feasibility measures how reasonable is the time estimated.

### 3.2 project design process

Project design is one of the earliest stages in the life of a project (exactly when it occurs varies by organization). During project design, an outline of the project is created, including:

The organization(s) responsible for completing it

A description of the project

Goals, outcomes, and objectives, and when they will be completed

Major Deliverables, products, and/or features

Success criteria, and/or monitoring and evaluation guidelines

Budget estimates

It’s important to involve your team and other key stakeholders in project design. This will help ensure important details are included, and that your project is realistic and achievable. Your project design should be carefully documented, and a variety of visual aids may be incorporated, as well. The following figure is a graphical representation of the various stages of a typical SDLC.



A typical Software Development Life Cycle consists of the following stages 7 STEPS TO EFFECTIVE PROJECT DESIGN

We’ll explain how to design projects for specific industries in the sections below. Regardless of your industry, however, there are some basic steps you should follow during the project design phase. These steps will help you create an effective project design document, and work more effectively with all parties involved.

1. Define Project Goal

First and foremost, you should meet with your team and key stakeholders to define the ultimate goal or outcome of your project. This might be the product that is going to be developed, the service that will be provided, or the problem your project will solve.

Consider the needs and expectations of all stakeholders and/or beneficiaries when determining your goals, and get their approval early on. Make sure your team members weigh in on the accuracy and feasibility of the goals you define, as well. Remember, the more of this you can figure out ahead of time, the easier your project will be to manage later.

2. Determine Outcomes, Objectives, and/or Deliverables

After the primary goals have been established, break each down into smaller, more manageable pieces. In some industries, such as nonprofit and education, these pieces are objectives or outcomes—for example, solutions to problems that have been identified for the population you’re trying to help, or learning goals that students need to achieve. In other industries, such as project management and software development, the smaller pieces may be deliverables, such as a marketing plan, or a prototype of the software.

During the design phase, some organizations break down outcomes, objectives, and/or deliverables even further into the tasks and activities required to complete them. Others save the task/activity breakdown for a later phase of the project life cycle, such as during project scheduling. It’s up to your organization to decide what works best.

Whatever your process, it’s helpful to use the SMART acronym when identifying outcomes, objectives, and/or deliverables. Make sure they are:( Garrett, J. (1991).

Specific: Be as clear and direct as possible so that later, you can plan the tasks that will be performed to achieve them. Provide specific guidance on which resources are involved and their roles.

Measurable: Outcomes, objectives, and/or deliverables must be quantifiable. This way, you’ll be able to measure results and track progress.

Achievable: Make sure goals can realistically be achieved given the resources, budget, and time frame available.

Relevant: All outcomes, objectives, and/or deliverables should logically result in achieving project goals and producing intended results.

Time-Bound: Provide a timeline for when they will be achieved/completed.

“Outlining projects [and] building that structure first is the key,” says Heather Cazad, Director of Operations at education-focused nonprofit Character.org. “You can get caught up in the minutiae of large projects, but you have to work from the outside in toward the details. Break up large sub-projects into smaller pieces.”

3. Identify Risks, Constraints, and Assumptions

Now that you’ve determined what you want your project to achieve, identify anything that could stand in the way of its success. Document any risks and constraints on budget, time, or resources that could affect your team’s ability to reach goals, milestones, and outcomes. Then try to resolve as many of these problems as you can. This will help prevent delays once the project is underway.

It’s also good practice to document any assumptions made during the project design phase. These will come in handy when you create a Statement of Work (SOW) and/or project schedule, and will also help you estimate costs more accurately.

“Look out for assumptions,” says Lonergan. “All projects are built on assumptions, and smart project managers know this. At the start of the project, the scope for assumptions is unlimited. Smart project managers capture these within the design process, then deal with them in a very disciplined manner.”

For example, if you assume that a necessary piece of equipment will be available when the project reaches the installation phase, this should be noted. That way, if the person who makes the schedule discovers the equipment isn’t available until a later date, you’ll be informed and can adjust the timeline and budget accordingly—before the actual work begins.

4. Prepare a Visual Aid

Once you’ve determined your goals, outcomes, and risks, you can prepare a visual aid to represent part or all of the project Garrett, J. (1991).. Visualizations are particularly common in the creative, construction, nonprofit, and software development verticals. However, using visualizations can be useful when managing any type of project since they provide team members and stakeholders an easily understandable snapshot of the project’s goals, outcomes, deliverables, products, services, and/or functionality.

Visual aids may include:

Sketches or drawings

Flow charts

Screenshots or screen designs

Prototypes

The type of visual aid you choose may depend on your industry. In project management, mind maps, and whiteboard drawings are often used to visualize early-stage project designs. In software development, diagrams, trees, charts, or maps of the software architecture and/or functionality are common . Prototypes or models may be created for product development process.

SDLC is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

The following figure is a graphical representation of the various stages of a typical SDLC.

Stages of SDLC

A typical Software Development Life Cycle consists of the following stages −

Stage 1: Planning and Requirement Analysis

Requirement analysis is the most important and fundamental stage in SDLC. It is performed by the senior members of the team with inputs from the customer, the sales department, market surveys and domain experts in the industry. This information is then used to plan the basic project approach and to conduct product feasibility study in the economical, operational and technical areas.

Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage. The outcome of the technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks.

Stage 2: Defining Requirements

Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts. This is done through an SRS (Software Requirement Specification) document which consists of all the product requirements to be designed and developed during the project life cycle.

Stage 3: Designing the Product Architecture

SRS is the reference for product architects to come out with the best architecture for the product to be developed. Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

This DDS is reviewed by all the important stakeholders and based on various parameters as risk assessment, product robustness, design modularity, budget and time constraints, the best design approach is selected for the product.

A design approach clearly defines all the architectural modules of the product along with its communication and data flow representation with the external and third party modules (if any). The internal design of all the modules of the proposed architecture should be clearly defined with the minutest of the details in DDS.

Stage 4: Building or Developing the Product

In this stage of SDLC the actual development starts and the product is built. The programming code is generated as per DDS during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.

Developers must follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc. are used to generate the code. Different high level programming languages such as C, C++, Pascal, Java and PHP are used for coding. The programming language is chosen with respect to the type of software being developed.

Stage 5: Testing the Product

This stage is usually a subset of all the stages as in the modern SDLC models, the testing activities are mostly involved in all the stages of SDLC. However, this stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

Stage 6: Deployment in the Market and Maintenance

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometimes product deployment happens in stages as per the business strategy of that organization. The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing).

Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment. After the product is released in the market, its maintenance is done for the existing customer base.

SDLC Models

There are various software development life cycle models defined and designed which are followed during the software development process. These models are also referred as Software Development Process Models". Each process model follows a Series of steps unique to its type to ensure success in the process of software development.

Following are the most important and popular SDLC models followed in the industry &miens;

Waterfall Model

Iterative Model

Spiral Model

V-Model

Big Bang Model

5. Ballpark Your Budget

It’s important to know the budget right from the start. Even if you don’t have a complete picture of the costs and incomes your project will generate, create a budget in as much detail as you can. The clearer you can be about your budget during the project design phase, the less likely you are to experience unexpected cost overruns later.

Estimating your budget will also help you determine the feasibility of the project. If the cost is more than your client, customer, funding source, or partnering entity can spare, the project can’t realistically be undertaken.

6. Determine Approval and Monitoring Processes

Now that you have a picture of the project’s goals, risks, and budget, decide how success will be determined. Garrett, J. (1991). List the criteria you’ll use to judge whether deliverables, outcomes, and the final product have been achieved. You should also determine what processes must be followed in order for the project and its elements to be approved, and who is responsible for approval. For projects that are quite technical or complex, you may also want to add a stage for “proof of concept.” This allows the preliminary design of a product or service to be tested for viability before the project advances to the next phase. Performing this stage can save a lot of time and money if the test isn’t successful. If your proof of concept is feasible, this can reassure clients, stakeholders, and/or funding sources they have made a good investment.

7. Use Proper Project Design Documents

Of course, you must also use the proper documentation to capture all this information. In project management, the output of the design phase may be as simple as a Gantt chart, flow chart, work chart, or hierarchy chart that is carried into the project planning phase. Garrett, J. (1991). However, many projects do not have a formal design phase. Instead, there is an initiation phase, in which a detailed project plans, project charter, or project initiation document (PID) is created. The approach you take will depend on your organization.

Creative projects, such as those in the advertising and marketing industries, also use a slightly different document for the project design phase: creative briefs. These documents more closely resemble a project plan or SOW, and serve to identify goals and outcomes, deliverables, team members, budget, scope, and schedule. Briefs may also include industry-specific sections, such as information about the target audience for a campaign.

### 3.3 tools and techniques

#### Web browsers

Web browsers are software applications which allow users to access information on the World Wide Web. The URL distinct to enable the browsers to retrieve the webpages, images and videos on the users device. A web browser is different from the search engines.

Mozilla Firefox

Mozilla Firefox (or simply Firefox) is a free and open-source web browser developed by Mozilla Foundation and its subsidiary, Mozilla Corporation. Firefox is available for Windows, mac OS, Linux, BSD, illumes and Solaris operating systems. Its sibling, Firefox for Android, is available for Android. Firefox uses the Gecko layout engine to render web pages, which implements current and anticipated web standards. In 2016, Firefox began incorporating new technology under the code name Quantum to promote parallelism and a more intuitive user interface. An additional version, Firefox for iOS, was released on November 12, 2015. Due to platform restrictions, it uses the Weskit layout engine instead of Gecko, as with all other iOS web browsers.

Firefox was created in 2002 under the codename "Phoenix" by the Mozilla community members who desired a standalone browser, rather than the Mozilla Application Suite bundle. During its beta phase, Firefox proved to be popular with its testers and was praised for its speed, security, and add-ons compared to Microsoft's then-dominant Internet Explorer 6. Firefox was released on November 9, 2004,and challenged Internet Explorer's dominance with 60 million downloads within nine months. Firefox is the spiritual successor of Netscape Navigator, as the Mozilla community was created by Netscape in 1998 before their acquisition by AOL. Firefox usage grew to a peak of 32% at the end of 2009, temporarily making version 3.5 the world's most popular browser. Usage then declined in competition with Google Chrome. As of March 2018, Firefox has 11.6% usage share as a "desktop" browser, according to Stat Counter, making it the second-most popular such web browser; usage across all platforms is lower at 5.44% (and then 4th-most popular overall). Firefox is still the most popular desktop browser in Cuba (even most popular overall at 62.77%) and Eritrea with 78.3% and 91% of the market share, respectively. According to Mozilla, as of December 2014, there were half a billion Firefox users around the world.

Google chrome

Google Chrome browser is an open source program for accessing the World Wide Web and running Web-based applications. The Google Chrome Web browser is based on the open source Chromium project. Google released Chrome in 2008 and issues several updates a year. It is available for Windows, Mac OS X, Linux, Android and iOS operating systems. The Google Chrome browser takes a sandboxing-based approach to Web security. Each open website runs as its own process, which helps prevent malicious code on one page from affecting others (or the computer operating system at large). The browser also supports Web standards such as HTML5 and cascading style sheets (CSS).

Google based the look of Chrome OS, its operating system for Web-based applications, on the Chrome Web browser. Chrome was the first major Web browser to combine the search box and the address bar, a feature that most competitors have since adopted. It also allows users to sign in with their Google accounts, which enables them to sync bookmarks and open Web pages across multiple devices. In 2010, Google launched the Chrome Web Store, an online marketplace where users can buy and install Web-based applications to run inside the browser. These apps are available as either browser extensions or links to websites

Microsoft edge

One of the most substantial changes to the Windows operating system with the introduction of Windows 10 was the debut of Microsoft Edge, the company's update to the venerable Internet Explorer. It’s the first major rebrand of the browser since 1995 and it doesn't just bring a completely new UI, but also, a huge amount of new features too, bringing it to bang up to date - and in some cases surpassing - its third-party counterparts. Microsoft’s Internet Explorer is still available for those that didn't want to make the jump to Microsoft's newest browser application, but Edge is still the default and it's probably only a matter of time before Microsoft makes the decision to cease support with Internet Explorer. Therefore, it's vital you get yourself up to speed with the application as soon as you possibly can. If you were a little hesitant about testing Edge because you'd rather wait until something's been tested as much as possible and any flaws have been fixed, worry not. With Edge, you can rest assured that it's fit for use. Microsoft has released numerous updates to the software, including bug fixes and some major feature additions, making sure it's on par with the likes of Apple's Safari, Mozilla's Firefox and of course Google's Chrome .Through added support for extensions and increased running speed, Microsoft has sought to refine its new browser to offer the best user experience possible. Microsoft has also recently launched versions of Edge for iOS and Android that offer synchronization features between your mobile phone and desktop.

#### Database

A database is the organized data which is stored and accessed through the use electronic devices in computer system. The databases are created through the use of formal designs and modeling techniques.

They created using;

**MYSQL**

MySQL is the world's most popular open source database. With its proven performance, reliability and ease-of-use, MySQL has become the leading database choice for web-based applications, used by high profile web properties including Facebook, Twitter, YouTube, Yahoo! and many more.

Oracle drives MySQL innovation, delivering new capabilities to power next generation web, cloud, mobile and embedded applications.

Text editor

These are type of computer programs which edits plain text. The programmers are sometimes known has notepad software.

The text is provided by the operating systems like the Microsoft windows and the software development packages.

These text editors are;

**Notepad ++**

Notepad++ is a free (as in "free speech" and also as in "free beer") source code editor and Notepad replacement that supports several languages. Running in the MS Windows environment, its use is governed by GPL License. Based on the powerful editing component Scintilla, Notepad++ is written in C++ and uses pure Win32 API and STL which ensures a higher execution speed and smaller program size. By optimizing as many routines as possible without losing user friendliness, Notepad++ is trying to reduce the world carbon dioxide emissions. When using less CPU power, the PC can throttle down and reduce power consumption, resulting in a greener environment

Webservers

These are server soft wares or hardware that are dedicated to run software that can serve contents to the World Wide Web (WWW).

The web servers are used to processes incoming network requests over HTTP and several other related protocols.

These are the type of webservers used;

**Wamp**

Wamp Server refers to a software stack for the Microsoft Windows operating system, created by Romain Bourd and consisting of the Apache web server, Open SSL for SSL support, MySQL database and PHP programming language.

**Xamp**

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, Maria DB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), Maria DB (M) (formerly MYSQL), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (Maria DB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

### 3.4 system models

#### The water fall model

This was the earliest of all the process to be introduced. This model is also known as the linear sequential life cycle model. It was user friendly and easy to understand. The waterfall model uses phases and each phase must be completed before the next phase. During the process there is no over lapping when the process starts. The waterfall model uses linear sequential to illustrate the software development process.

This process of software development has separate phases which are divided. The output from the first phaseisusedastheinputinthenextphasesequentially. 

The sequential phases in this model are as follows;

Requirement gathering and analysis

This is the first phase where all the possible requirements of the system to be developed are specifically organized and documented in a specification document

System design

All the requirement specification are studied. This requirement is from the first phase, after studying the requirement then the system design is prepared. Through the steps design the developer is able to specify the system requirements and the hardware specification. The system design also helps to define the overall system architecture.

Implementation

This phase uses the inputs from the system design. Here the system is developed in small programs which are known as units. The units are int5ergreted in the next phase. The units are developed and tested separately for their different functionalities. This is known as the unit testing.

Integration and testing

After testing all the units developed from the implementation phase then the unit are integrated into a system. For any failures or faults of the system the test for the post integration is conducted.

Deployment of system

After the functional and the nonfunctional testing is done the system is then deployed to the market or to the customer environment.

Maintenance

In the client environment there are some issues that arise. Patches are released to fix those issues. The developers also come up with new versions of the products some which are better versions. To deliver the changes of the client environment the maintenance is done.

##### References

speck, P. S., & Elliott, M. T. (1997). Predictors of advertising avoidance in print and broadcast media. Journal of Advertising, 26(3), 61-76.

Adapted from Garrett, J. (1991). Design and The door for engagement is openedby marquis matsonpick tom 83 exceptional Social Media and Marketing Statistics for 2014." Yahoo Small Business Advisor. Yahoo, 20 Apr. 2014.

Goyal, S. (2013).Advertising on social media. Scientific Journal of Pure and Applied Sciences, 2(5), 220-223. doi:10.14196/sjpas.v2i5.551 Syagga, P. M. Report of the interregional workshop on employment generation in urban works programmes through efficient use of local resources.

Shewan, Dan. "Social Media Advertising: Which Platform Is Right for Your Business? | Wordstream.

McDonald, P., & Thompson, P. (2016). Social media and the reshaping of public/private boundaries in employment relations. International Journal of Management Reviews, 18(1), 69-84.

s Technology. Reprinted with permission of Cambridge University Press.

. Brown, K. G., Chapman, D., Gilson, L. L., Johnson, A. F., Kahai, S., & Maynard, M. T. (2018, July). The Psychology of the Internet at Work. In Academy of Management Proceedings(Vol. 2018, No. 1, p. 11881). Briarcliff Manor, NY 10510: Academy of Management.

Syagga, P. M. Report of the interregional workshop on employment generation in urban works programmes through efficient use of local resources.

|  |  |  |  |
| --- | --- | --- | --- |
| ***Tangible Cost*** | ***Unit*** | ***Amount*** | ***Total*** |
| *Development Costs* System Analyst  System Architect  Programmer  Designer  Project Manager  Resource Manager  Clerk  Accountant  Staff | 1  1  2  1  1  1  1  1  20 | RM 5,000.00  RM 5,000.00  RM 5,000.00  RM 5,000.00  RM 4,000.00  RM 5,000.00  RM 2,000.00  RM 5,000.00  RM 2,000.00 | RM 5,000.00  RM 5,000.00  RM 10,000.00  RM 5,000.00  RM 4,000.00  RM 5,000.00  RM 2,000.00  RM 5,000.00  RM 40,000.00 |
| *Software Costs* Software License |  | RM 15,000.00 | RM 15,000.00 |
| *Hardware Costs* Personal Computer  Pentium IV 1.7GHz | 2 | RM 13,000.00 | RM 26,000.00 |
| *Operating Costs* Stationary & Maintenance |  | RM 2,000.00 | RM 2,000.00 |
| *Miscellaneous Costs* Conversion |  | RM 1000.00 | RM 1000.00 |
| Total |  |  | RM 125,000 |

1. **Cost**

* *Tangible cost*