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Demand of Web Based Application Development Technologies

Madiha Hameed[1], Muhammad Abrar[2]

[1]Team Lead Development, Distance Learning, University of Gujrat, Gujrat, Punjab, Pakistan

[2]PHP Internee, Distance Learning, Univeristy of Gujrat, Gujrat, Punjab, Pakistan

Abstract: ***This document has written to aware people who used to study computer science and want to build their career in computer science field or in software engineering or information technology etc. Students feels problems while deciding to learn technologies to make their grip on that, they never know which technology is most popular in today's market to make their worth in market with respect to employment prospective, You need to make sure you are focusing on languages with good, sustained interest and which are on the up. In this paper we have taken a present the fact and figures from different sites to know the most popular languages used today, and this paper also tell that why and in which case you used any specific web development language, a brief overview and comparison of different web development language is given with conclusion.***

Keywords: Web based Application, Development, TIOB

1. Introduction

Today many languages are used in web development, and this field becomes very popular and fastest growing field in the world, according to US News, It has released its list of the 100 best jobs in 2014, and the No. 1 job on the list is: web based software developer. When you come to choose perfect language for developing your website you have to simply understand the language that best serves your needs according to your desire or budget [1]. There are some step to choose language that can best suited you, you have to determine the following first.

1. Your platform for the server(where your website located)
2. Server software
3. Databases(MySql, Sql Server, etc)
4. Your expertise in programming language
5. Your budget (cost)

The Operating system you are running on your system is your platform and your choice of OS may play a major part in the language you choose, and some time due to some language problem you need to change your operating system.[2] The other thing is to choose server software, On Windows systems; you have IIS which comes installed for free with windows. POSIX- compliant software is mostly used by web server and its like Unix system, it has included very popular Apache web server. This is why all programmers or would be programmers should pay attention to the Tiobe Index which charts the popularity of programming languages and compiles it into a list of the top 20 most popular programming languages.[3]

2. Top Level Languages

Apr 2014	Apr 2013	Change	Programming Language	Ratings	Change
1	1		C	17.631%	-0.23%
2	2		Java	17.348%	-0.33%
3	4	^	Objective-C	12.875%	+3.28%
4	3	v	C++	6.137%	-3.58%
5	5		C#	4.820%	-1.33%
6	7	^	(Visual) Basic	3.441%	-1.26%
7	6	v	PHP	2.773%	-2.65%
8	8		Python	1.993%	-2.45%
9	11	^	JavaScript	1.750%	+0.24%
10	12	^	Visual Basic .NET	1.748%	+0.65%

Figure 1: Top Ten Languages

2.1 C Programming Language

C is a universal programming language, and popular for script in various domains, such as operating systems, numerical computing, graphical applications. it is base of all languages It offers "high-level" organized software design concepts like statement grouping, decision making, and looping, as well as "low-level" capabilities such as the ability to manipulate bytes and addresses.[4] The language is convoyed by a standard library of functions that distribute a group of mostly used processes. E.g.: printf() is standard function use to print out put as standard library in different languages prints text to the screen (or, more

2.2 Java Programming Language

Java is a high-level programming language released in 1995, it is initially introduced by Sun Microsystems. Java runs on a multiple platforms, like Windows, Mac OS, and the different versions of Linux. Java develops extraordinary quality web application. Java produces application with the help of API. It has tree parts which are servlet, Java Bean

and JSP, these are used as a controller, modal and view. Java bean use as a model which can be located in distributed environment. [5]Java has very good security features like authentication, authorization, transaction It also provide flexibility in Database Connection. It supports the processing of XML documents using the Document Object Model (DOM) and by using Java API for XML processing. JAXP enables applications to parse and transform XML documents independent of a particular XML-processing implementation.

Java Persistence API is a Java technology standards-based solution for persistence. Persistence uses an object-relational mapping approach to bridge the gap between an object-oriented model and a relational database [4].

2.3 Objective –C Programing Language

Objective-C is the primary programming language it is used in OS X and iOS development. A great conventional set of C language and offers object-oriented skills and also runtime vibrant. Objective-C obtains the composition, categories, and flow control of declarations from C and include grammar for presenting classes and approaches it get the support of smooth language for the management of object graph and, submitting many task still runtime.[7]

2.4 C++ Programming Languages

It is an object-oriented programming and is intermediate-level language, It was designed to enhance the C language but it becomes a complete language, It is multi-purpose language , desktop system, system software, video game and high speed servers are made by C++ and it is used for web development also. Firefox web browser Winamp (Player) and adobe programs are developed by using c++. It has large number of OOP features:

1. Multiple inheritance
2. Strong typing
3. Dynamic memory management
4. Templates (generics)
5. Polymorphism
6. Exception handling
7. Overloading
8. Verity of data types such as arrays, linked list, binary tree, strings, pointersetc

2.5 C # Programming Language

offers a well arranged memory model that adds a higher level of concept again, that is ease and improves development times, there is a complication in access to lower level APIs and creates focused presentation requirements challenging. It is definite to implement enormously high performance software in well-arranged memory model, and it needs awareness of the implementation. The arrangement of C# syntax is positively demand less than C/C++ and also guide new programmer to learn.[8]

2.6 Visual Basic Programming Language

Visual Basic is procedural languages released in 1991 it is famous for its windows user interface programming user interface is extremely difficult and other Graphical User Interfaces (GUI) are no better in front of visual basic. It offers a appropriate technique for developing the user interfaces. Visual Basic can line c based code to improve the efficiency of user interface [9].

PHP Programming Language
PHP is great for web applications.
PHP scripts are executed on the server.
PHP supports many databases (MySQL, Informix, Oracle, Sybase, Solid, PostgreSQL, Generic ODBC, etc.)

It is open source software and is free to download and use.

PHP is released under the PHP License
PHP runs on different platforms (Windows, Linux, UNIX, etc.).
PHP is compatible with almost all web servers used today (Apache, IIS, etc.).
PHP runs on server side efficiently

As PHP runs efficiently, it attracts new developers or coder to learn PHP and make full grip on it [6].

A web service consists of a two things one is server to serve requests to the web service and the other is a client to invoke methods on the web service. The PHP class library provides the SOAP extension to develop SOAP servers and clients and the XML-RPC extension to create XML-RPC servers and clients.

2.7 Python Programming Language

Python is a high-level, server-side scripting language for websites and mobile apps. It is very easy to learn because of its readability and syntax, it means that a developer has to write few line of code for a problem they would in other programming or scripting language. It has been used in development of web apps like Instagram, Pinterest and Rdio though its associated Framework, Django and is used by Google, Yahoo! and NASA.[10]

2.8 JavaScript Programming Languages

JavaScript is a frivolous, implicit programming language it is deliberate to develop associating applications It is balancing combined with Java and also integrated with HTML it is usually recognize as java script but now new version are coming in xhtml form.[5]

2.9 Visual .NET Programming Language

NET is a platform introduced by Microsoft and cares various programming languages. The basic purpose of its development is to less the effort of the developers to build the requests in different programming language. Now the days it is supporting the C#, VB.NET, F# and VC++. Development through .NET is effective for performance. Now .NET is introduced as WPDF and Silverlight which are

very effective for development of rich user interface in high performance and scalable [11].

3.Comparison

Determine what you want to develop:

1. Web application or desktops system
2. Is your application is for commercial use or open source
3. What is the scope of language in market job?
4. Learning curve for a particular language.

Today job competition is at its peak and to become a successful or competitor programmer you have learn at least one web development language , one desktop application development language and one mobile platform in order to distinguish yourself [3]

Popular search engines such as Google, Bing, Yahoo!, Wikipedia, Amazon, YouTube and Baidu are used to calculate the ratings. In this paper TIOBE is taken for the facts that shows the popularity of the programming language, The table given below shows the polarity of programming language for April 2014, but it is not about the best programming language, the table below will help the developers to check whether their skills are up to dated or not or they will able to take decision to start a new project with most popular language [12].

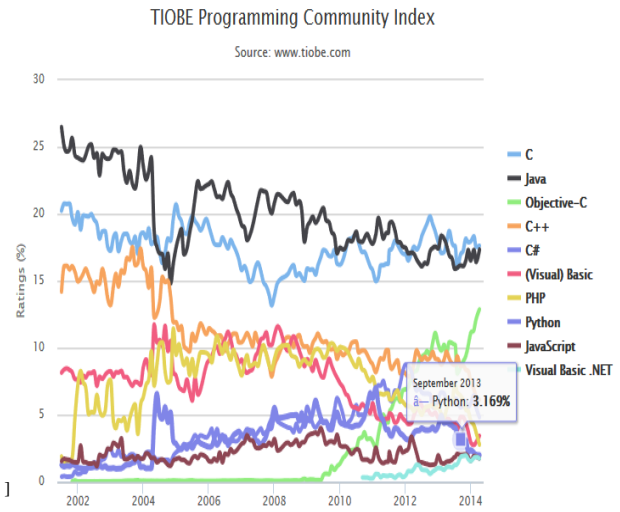

Figure 2: Tiob last 10 year report

The top 8 programming languages of: *C, Java, Objective-C, C++, C#, PHP, Visual Basic and Python* have not changed position over the past year and, with the exception of Objective-C, have occupied the top 10 spots consistently for the past 10 years, and they represent solid dependable career options.

Objective-C, Transact-SQL, F# and D have all shown massive surges in popularity in recent years, which means there is a chance that supply may not have caught up with demand so this could be a highly employable area for coders who are skilled in these areas [1].

Perl, Lisp, Delhi/Object Pascale have all shown recent declines in popularity, suggesting that there could currently be an oversupply in this area so you might want to be cautious about entering these areas for the moment, or at least until they show an upswing in demand [2].

4.Conclusions

Obviously all languages have their strengths and weaknesses. Sometime one work tremendously well for a particular organizations with restricted support by hardware and network abilities wherever the computer scientist desires exact control on the system working its efficiency transaction speed on which application performance based . This might be a serious issue for some applications, especially in embedded systems or other very exact uses.. For example, Google is using python and Facebook is develop in php both are well organized languages and both site are will famous and mostly used we based applications and never compromises their efficiency reliability and users security same as for desktop application .net is preferred. Every language is its own worth but it up to user to take a wise decision regarding to its requirement.

References

[1] V. De Castro, J. V. Vara, and E. Marcos, ―Model transformation for service-oriented Web applications development‖, in Workshop Proceedings of 7th International Conference on Web Engineering, July 20, 2007, 184–198.
[2] Name, and B. Name, "Journal Paper Title", Journal Name, Vol. X, No. X, Year, pp. xxx-x J. M. Vara Mesa, ―ATL/AMW use case modeling Web applications: Detailed description and user guide
[3] (2009, access date), http://www.eclipse.org/m2m/atl/usecases/webapp.modeling/resources/User.Guide.pdf xx.
[4] Adrian Birka and Michael D. Ernst. A practical type system and language for reference immutability. In OOPSLA, pages 35–49, Oct. 2004.
[5] Joshua Bloch. JSR 175: A metadata facility for the Java programming language.http://jcp.org/en/jsr/detail?id=175,
[6] Sep. 30, 2004.
[7] BurstallR.andDarlingtonJ., Atransformation system for developing recursiveprograms, urnaloftheACM,24(1),44-67,1977.
[8] Gunter C.andMitchellJ., TheoreticalAspects of Object-Oriented Pro-gramming, MITPress, 1994.
[9] TennentR.D.,SemanticsofProgrammingLanguages,Prentice-HallInter-national,1991
[10] AhoA.V.,SethiR.andUllmanJ.D.,Compilers:Principles,TechniquesandTools, AddisonWesley, 1986.
[11] Kernighan, B.W. and Ritchie, D. M. The C programming Language Prentice-Hall,1988
[12] Martin, R. C. Java and C++ A critical comparison.Cambridge Sigs Reference Library Series, 1998.
[13] Walker, W., Lamere, P., and Kwok, P., FreeTTS - A Performance Case Study Sun Microsystems Laboratories, Palo Alto, CA, August 2002
[14] Ritchie, D. M. The Development of the C Language
[15] History of Programming Languages-II ed . Thomas J. Bergin, Jr. and Richard G. Gibson, Jr. ACM Press, New York, NY, and Addison-Wesley, Reading