

# A Systematic approach of Software development implementation process-Part I

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**Abstract**—This research paper most useful for all academics student of computer science. In this paper I have targeted all those student who works on their academic project. Since long time I found most of student not follow actually implementation process which must be follow by all top software companies in world. All students just focus on the output but they don't know about a process or path they must use because in software filed not only output is important but it is also important that which path you must follow. Due to wrong process most of the time software will not work properly or speed is very slow So this paper is very useful & also student must know about guidelines of coding & database designing. In this part of paper I am not providing detail of technology which must be used for software development.

**Keywords:** Software development, Project, Database designing, Process

## I. INTRODUCTION

The aim of these guidelines is to give knowledge about uniform coding habits adopted by most of the software companies & when student prepare their project then they must use this implementation process so they can work easily in companies after completion of their courses.

A mixed coding style is harder to maintain than a bad coding style. So it's important to apply a consistent coding style across a project. When maintaining code, it's better to conform to the style of the existing code rather than blindly follow this document or your own coding style. Main problem with students are they don't know this all guidelines & even they make successful project but still they face lots of problem in companies.

All student of final year know about SDLC in software engineering & we consider that they follow all phase of SDLC during software development but if they used bad coding styles or not follow basic principal of all languages then they cannot run successful project for long time. We all know that most of universities included C , C++ languages in semester .Now there are two way to create programs using this languages but again a implementation style & writing code style is very important .If you not used proper code then it is difficult to manage as well as difficult for other student to understand codes.

## II. IMPLEMENTATION APPROACH

Here I am explaining this section with very basic program written in C Prog Language. Now before writing systematic approach of this program, I must give reason why I am giving this basic example because every student belongs to computer science written this program so they can understand easily.

**Note:** All starting letter must be in small letter like Void must be write in void

```
/*This is a simple program to find out whether number is prime or not of a given number*/  
#include<stdio.h>  
#include<conio.h>  
Void main ()  
{  
    clrscr();  
    Int no,i ;  
    Printf("Enter the No :- ");  
    Scanf("%d",&no) ;  
    For(i=2;i<=no-1;i++)  
    {  
        If((no % i)==0) // Check each no other than 1 & no itself  
        {  
            Printf("This number is not a prime number !!");  
            Break;  
        }  
    }  
}
```

```

    }
    If(no==i)           // At last if value of i & no is same then it is prime no.
    {
        Printf("A number %d is a prime number !!", no)
    }
    Getch();
}

```

**Explanation:** Above program is very basic program but when students see code then they must understand easily above code. Here coding styles is must be good, proper places for opening & closing parenthesis, how to user see output that is also important.

This is first step of software learning process but unfortunate thing is student not follow above standard. Comment is very important part because if other user want to understand logic of your program then this comment helps a lot even some time happened with developer that they forgot their own written code so this comment are very useful.

Now in next section I am explaining normal implementation techniques which student can implement in any technology either it would be .NET or JAVA or Other.

### III. BASIC IMPLEMENTATION TECHNIQUE

**STEP 1 :** First step is variable declaration so here must use proper name of variable so other developer can understand properly that which variable used for which purpose.

Int Age;

Float Percentage;

String FirstName , LocalAddress;

- ✓ In above variable declaration we must use proper name means if want to calculate the age of person or percentage of person so variable name must belong to same.
- ✓ First letter of variable name must be capital letter & if variable name use two words then First letter of first word & second word must be start with capital letter.

**STEP 2:** Second step is function declaration so here must use proper name of function so other developer can understand properly that which function used for which purpose.

Void SetVariableValue();

Void DataBind();

Here also we used same properties as I above declare in variable declaration.

**STEP 3:** Our form or page uses some common controls like textbox , label , button , datagrid view .

- ✓ **Textbox:** txtFirstName , txtAge , txtEmailID , txtHomeAddress
- ✓ **Label:** lblFirstName, lblAge, lblEmail, lblHomeAddress.
- ✓ **Button:** btnLogin , btnRegistration , btnCancel
- ✓ **Datagrid View:** dgvDisplay, dgvEdit

As we see on above control every control starts with its own short name because this is standard to identification.

If we found in coding txt or lbl then it is easily understandable that we have used textbox & label.

Proper naming is very important because suppose In one form many textbox used for different purpose & if we not set proper name then it is not manageable in coding. On the same way this concept used in Button & other controls.

**STEP 4:** If we used dynamic application then we must required database but here I am just explaining which points are important while working on database.

- ✓ Database connection must be open & close properly.
- ✓ Before opening or closing connection we must check the state of connection, If state of connection is close then we open connection.
- ✓ On all project connection string must be only one means in every technology there must be present one file where we declare our database connection. For example in asp.net web.config file is file where we declare all important characteristics of database connection.
- ✓ All database handling command must be declare inside the class & every command define in proper function.

For example if we want to perform insert & update query then we must use Insert & Update function in class.

✓ It is always important to close & open all command & data reader if we used.

All above functions are very important while we used database because if above main function not used properly then surely our application works slow. Database is the most important phase of any project & we must take care of this part during project.

**STEP 5:** We must set initial page of the project because it is also important to set first page. Every project has initial page from where our application starts.

For example Gmail & facebook start with their login page & after that other pages run depends upon login identification.

**STEP 6:** We must validate our data carefully before going into a database .If our text box belong to email or phone number the we must ensure that the wrong data not go to inside database.

If we uses web application then JavaScript is the best option for any technology because we all know JavaScript is client side scripting languages & its provide faster execution.

**STEP 7:** Use proper comment at every important place because it give clarification to other user why you used logic & what are the important. Most of the developer not uses comments but it is always recommended by the companies to use proper commenting in coding.

**STEP 8:** In last portion of coding always dispose all objects when it is no longer used in programming.

#### IV. CONCLUSION

In this paper I just provide a initial implementation process of project. In the next part of my research paper I will provide a detail coding styles & other factors.

My intention is very clear about how student approach coding while developing projects .IF student follow basic techniques as well they read my next paper then I am sure they will learn lots of important parts of projects. This all standard follow all software companies & student aware this all before entering in software companies then it is easier for them to work on.In this paper I am not cover which architecture is better for dynamic application.

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