

# PLANNING, SCHEDULING, TRACKING OF RESIDENTIAL BUILDING USING PRIMAVERA SOFTWARE P6

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## ABSTRACT

*In Project Management, proper arrangement and setting up is very essential element. Planning is a base for each and every work in management field. It serves as base for executing, monitoring and controlling and closing. When quality time is spent on planning, it will fundamentally minimize the time spent on execution. Planning manages chalking out a future strategy and choosing ahead of time the most suitable course of activities for accomplishment of predefined objectives. Planning ensures a head of time-what to do, when to do and how to do. It gives an idea about where we are and where we need to be. It is a bridge between present and future course of action. Thus planning is nothing but think before it is executed. Planning is a systematic/orderly thinking about way and needs to reach the determined goal/ destination. Planning is an activity in critical thinking. It helps in avoiding instabilities, confusion, delay of work, unexpected risk, wastages etc.*

*This paper deals with the planning, scheduling and tracking of a residential building at New town, Yelahanka which has 116 flats (G+4) where construction is in progress. This paper also ensures a comparison between the baseline duration and cost to actual duration of project using project management software tool Primavera P6*

**Keywords:** *Planning, Scheduling, Critical path, Tracking, Gantt chart, EVM.*

## 1. INTRODUCTION

Though technology is developing rapidly and vast day by day, the basic and fundamental needs which are required by human have not changed. In the today's world scenario, the construction industry has a great demand as the construction industry has become a fundamental part of a country's framework and mechanical growth and development. As the tall building, multidwelling are rising throughout the world day by day with the advance construction technology and computer skilled knowledge such as applying various software, but still fail in efficient and effective project management. The project management is an art and mission of preparing, organising and directing human effort to control the forces and use the materials of nature for the requirement of human growth.

Planning is something advance thinking, what to do, how to do, where to do, the approximate resource required and number of days to complete particular task in construction project. This project ensures a case study on a residential apartment, where analysis has been done using primavera software p6. An efficient and

effective planning and scheduling using primavera software helps to effective control and monitor the progress of work by surveying and reconstructing under a few changes so that the work runs hand in hand with the estimated time and budget. The necessary of planning is to develop a model that allows predicting the activities and resources that are critical for in time completion of the project. The main intension of planning is to ensure all activities and resource are managed and the project is delivered both “on time” and “within budget”.

## 1.1 ADVANTAGES OF PLANNING

Planning helps to reduce

- Delays in project work
- Avoid over budget
- Avoid confusions
- Ensures systematic work

According to PMBOK guide fifth edition the term project is something impermanent attempts which are taken to create a desired and unique destination, goal or result. A construction project includes multi skill technology and various wide ranges of activities are related. These skill changes with type of project nature of job and mentality of contractor. For any kind of construction works the five processes are same right from estimating ,planning, accounting and controlling and need to reach the goal effectively, so to maintain such time schedule as per planned construction processes have employed new tool and techniques in project management. We have software like primavera and MSP which are efficiently used in project management now days.

## 1.2 ABOUT PRIMAVERA

Oracle primavera p6 is also known as EPPM which is abbreviated as enterprise project portfolio management. It is also the most powerful strong and easy handling software and used solution for worldwide, organizing, planning, managing, and execute project, programs and portfolios. Primavera P6 software helps to achieve the maximum return on investments in project and progress. Primavera P6 gives a single solution for multi projects of any size. Primavera can handle the projects of large size according to the persons need.

History of primavera

In 1983, primavera came into System Corporation, whereas in 2008 primavera was undertaken by oracle and is now known as oracle primavera.

There are 4 modules of primavera

- Primavera foundation
- Primavera web
- Primavera progress reporter
- Primavera team member

There are 3 layer of primavera

- Application layer
- Functional layer
- Database layer

Working project in primavera ensures

A group of activities works in a systematic work breakdown structure. This leads to the most systematic flow of work. This systematic flow of work is adopted by using techniques called CPM (critical path method) and programme evaluation and review technique (PERT).Using primavera tool one can analysis the proper management with documentation. Using primavera tool one can compare baseline duration and actual and cost variance using EVM (earned value method).

## 1.3 OBJECTIVES

- To plan and schedule project with all basic relationship using primavera p6.
- To compare between planned duration and actual duration.

- And tracking of project using EVM method.
- Ensure cost variance in project

## 2 PROJECT MANAGEMENT

Project management is a tool of an art and knowledge where application of understanding, skill, tool and technique are implemented on the project tasks to succeed with the project require and destination.

Project management deals with

- Identifying various requirements from stakeholder.
- Address needs, concern and expectation of stakeholder.
- Set up, manage and carry out active, effective, and valuable communication.
- Recognize and adjust finishing project limitations.

PMBOK is the document for the best practice on project management. These PMBOK is released by PMI and this PMBOK get revised once in four year.

According to the PMBOK fifth edition the project management framework consist of five major project management process groups with 47 processes.

The five project management processes are

- Initiating
- Planning
- Execution
- Monitoring and controlling
- Closing

There are ten project management knowledge areas which are as follows

- Integration Management
- Scope Management
- Time Management
- Cost Management
- Quality Management
- Human Resource Management
- Communication Management
- Risk Management
- Procurement Management
- Stakeholder Management

There are 47 processes which are mapped under 5 processes and 10 knowledge areas.

### 2.1 PLANNING

The fundamental key function of management is planning. It involves charge out a future line of action, and decides in advance the generally suitable course of action for achievement of goal which is pre determined. It is advance thinking of task with four “W” & one “H” -what to do, when to do, where and how to do. Planning bridges and plasters the gap from where we are and where we need to be. Future course of action is a perfect plan and is an exercise in dilemma solves and resolution making. It deals with purpose course of actions to accomplish considered necessary goals. If a plan is perfect then the way for accomplishment of pre determined goals is ready to serve magnificent for the world’s healthy use, systematic thinking about the ways of planning is necessary, because it helps in proper utilization of human and non human resource. Once a plan does justice for determined goal then, the society can avoid the side effects from the plan like wastages, confusions, uncertainties and risks. In order to avoid all these chaos it’s better to plan perfectly before the establishment of an unbiased goal.

#### 2.1.1 Objective of planning

- Minimize the time consumption

- Remove the uncertainty or minimize risk
- Reduce resource usage
- To improve the efficiency of operation
- To get better understanding of the what is our aim
- Give early warnings in case of potential problem
- Ensure basis for monitoring and controlling
- Will take proactive, not reactive action

### 2.1.2 Planning helps to reduce or avoid

- Over extension of project work or delay in project work
- Additional over cost or over budgeted
- Revenue loss
- Cost of inconvenience
- Over long of time claims
- Over resource required

Since planning forms for basis for monitoring and controlling and also helps to create project scope, sequence activities that one by one, calculate the resource required for whole project, even calculate gross estimate budget plan of project.

## 2.2 SCHEDULING

Scheduling is nothing but reflection of plan, that is determining the timing of task or activities in project when and which task will perform. In simple way planning deals with three basic words how, what, and who whereas scheduling deals with when and why.

It is also defined as comprehensive plan of tasks in development work with respect to time. It is also a better communication tool between all the stakeholders or people involved in project. It gives us over all snapshot of project with progress detail. It is very difficult to explain unskilled people about project like what is going on and what is expected to take place in future without schedule details .Since work environment becomes more complex day by day. It will be more pressure to deliver the suitable results within time and budget. So using advanced scheduling technique in primavera helps to

- Ensure work flows
- Giving importance to deliverables
- Can have better management meeting with different stakeholder
- Give idea to use resource in optimal way
- Can ensure proper management with documentation and control.

## 2.3 TRACKING

Tracking is the one major phase in project management. It is a process of collecting all information regarding each task of the project and entering and analyzing the information collected to actual project which gives performance of project that is comparing actual duration with planned duration. Before the commencement of work the first thing to focus on project planning, when work progress gets starts the next and foremost phase in project management is tracking.

Tracking mean collecting and reporting the details of project such as what is work done and by whom it is done, when it is done, how much cost it is required to complete. And these details are called actual project details. This actual detail is compared with planned details. This is useful in identifying the difference between planned and actual.

Tracking helps us to know

- To understand project progress
- To take suitable action against work
- To provide documental information to stakeholders

## 2.4 IMPORTANCE OF PLANNING AND SCHEDULING

The important and basic fundamental functions of construction project management is planning and scheduling because activities involved in constructions helps engineers to complete the task in time and within the financial plan. The essential and demanding activity in the management and processing of construction projects is “construction planning”. It deals with the work involved in construction, technology options and the estimating of the quality and quantity resources required and durations for particular tasks and identifies any interactions to particular task. In a construction industry plan forms basic for the entire developing budget and the schedule for work. These two things are main criteria in construction project, in case if a project runs over cost the project ends with financial crisis which affects directly on activity and indirectly on project. And in case with schedule it delays the project leads to extension of project again having impact on completion of project in time. Therefore the planner should focus on predecessor of an activity like what should come next.

The continuation of undertaking task precedence (resulting in critical path scheduling procedure) is stress by traditional scheduling process. Ultimately most multifarious or complex projects involve reflection of cost and scheduling over time, so that planning, monitoring, or guiding and documentation maintenance must consider both parameters cost and schedule. The assimilation of schedule and information of financial plan is a major concern in a construction industry. The importance of planning is mentioned below:

- Planning helps to reduce the cost by optimum utilization of available resource that is resource management and extraction of useful things from the waste.
- Planning reduces unnecessarily approaches, multiple of works that is double work and inter departmental fights that is it reduces the work which is copied by some illegal sites, and resolves the disputes of inter departmental works.
- Planning builds the new ideas and creativity among the project manager
- Planning impact is a competitive strength to the enterprise.

The fitting of the final work plan into a actual time scale is done by scheduling. The time and order of various construction activities is shown by scheduling. It ensures by means of idea of “when to do it”. Scheduling of the programme, preparation, and construction process is an important and fundamental tool in the daily management as well as construction managements and reporting or the project process to create a realistic and attainable project schedule, one must take the following steps

- Identification of task
- Plan the people required-
- Plan with your team
- Seeking the risks

## 3 METHODOLOGY

### 3.1 Research Methodology

Research analysis are categorised into three stages. it is theoretical descriptions.

- Pre data collection or pre information collection
- Data collection or information collection
- Post data collection or post information collection

#### 3.1.1 Pre data collection

As the name indicates, pre data collection means it’s a collection of a data or information before the commencement of work. It is a small glimpse of the project.

Collecting the data from the various studies, previous project after collecting the data it is maintained in the form of report and set the objectives required for the project in the form of literature review and set the objectives required for the project in the inform of the problem statement. It also deals with what works has to be done with what data collected. In this stage data of site, estimation of materials required, manpower, equipments’ are collected.

#### 3.1.2 Data collection



In this stage data are collected by visiting the site regularly and by identifying construction sequence. In this stage the data are collected in the form of:

- DPR daily progress report
- Work output of labour
- Making comparisons

Daily progress report -The DPR ensures daily progress report that is detailed description of work done and number of labour and quantity of resource required for the work .DPR are maintained regularly.

Work output for labour-This gives a detail of the amount of work done by one labour (person) in one day. Thus useful in calculation number of days or hours required to complete the activities and also to ensure how much manpower required on site.

Comparing the actual duration with planned duration-The data collected from daily progress report and work output for labour will give an idea of actual duration and it can be analysed in primavera software.

### 3.1.3 Post Data Collection

This stage is a software part. In this stage the data which are collected from pre data collection and data collection are analysed in primavera software. Tracking of project and even result and report can be generated in software.

## 4 ANALYSIS DONE IN SOFTWARE PRIMAVERA P6

Activities are the basic and functional key elements of a project. Activities should have durations, costs, resource requirement and roles requirements. Each activity is interrelated with relationship.

Activity Name	Original Duration	Activity % to Project Start	Planned Start	Actual Start	Estimated Total Cost	Estimated Total Cost	Planned End	Actual End	Open Account
5000	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	4200
44	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	44
45	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	45
46	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	46
47	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	47
48	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	48
49	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	49
50	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	50
51	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	51
52	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	52
53	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	53
54	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	54
55	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	55
56	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	56
57	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	57
58	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	58
59	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	59
60	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	60
61	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	61
62	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	62
63	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	63
64	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	64
65	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	65
66	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	66
67	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	67
68	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	68
69	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	69
70	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	70
71	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	71
72	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	72
73	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	73
74	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	74
75	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	75
76	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	76
77	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	77
78	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	78
79	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	79
80	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	80
81	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	81
82	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	82
83	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	83
84	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	84
85	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	85
86	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	86
87	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	87
88	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	88
89	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	89
90	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	90
91	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	91
92	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	92
93	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	93
94	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	94
95	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	95
96	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	96
97	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	97
98	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	98
99	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	99
100	100%	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	Rs 0.00	Rs 0.00	20-Feb-16 10:00 AM	20-Feb-16 10:00 AM	100

Fig 1 Activity sheet

After the list of activities, duration, and the relationship assigned to each and every activity, the next step is to schedule the project. Primavera project management start schedule from start of the project and continue till the close of the project and gives early start and early finish to each activity.

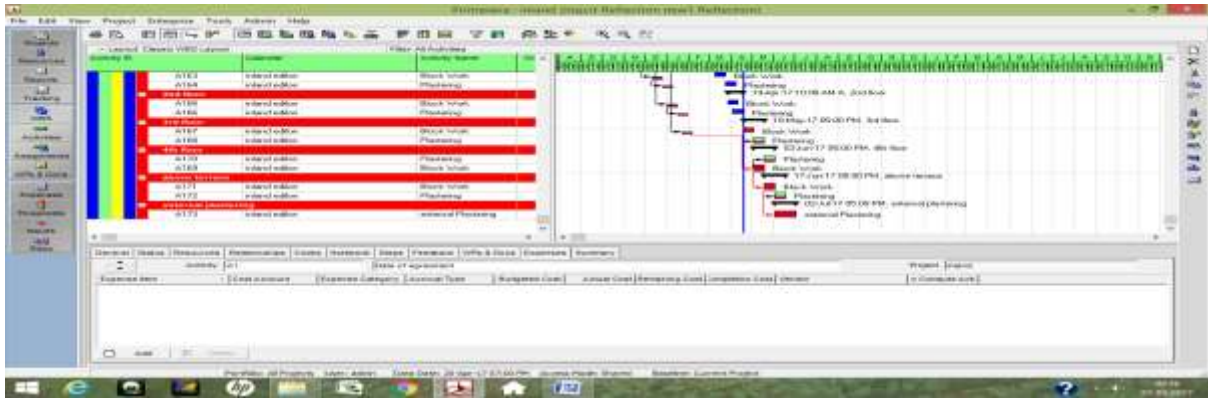


Fig 2 Gantt chart view

Baseline is a snapshot copy of planned project. Once the baseline is assigned to project planned details will get fixed that is baseline start and baseline finish will get fixed which gives actual duration of the project.

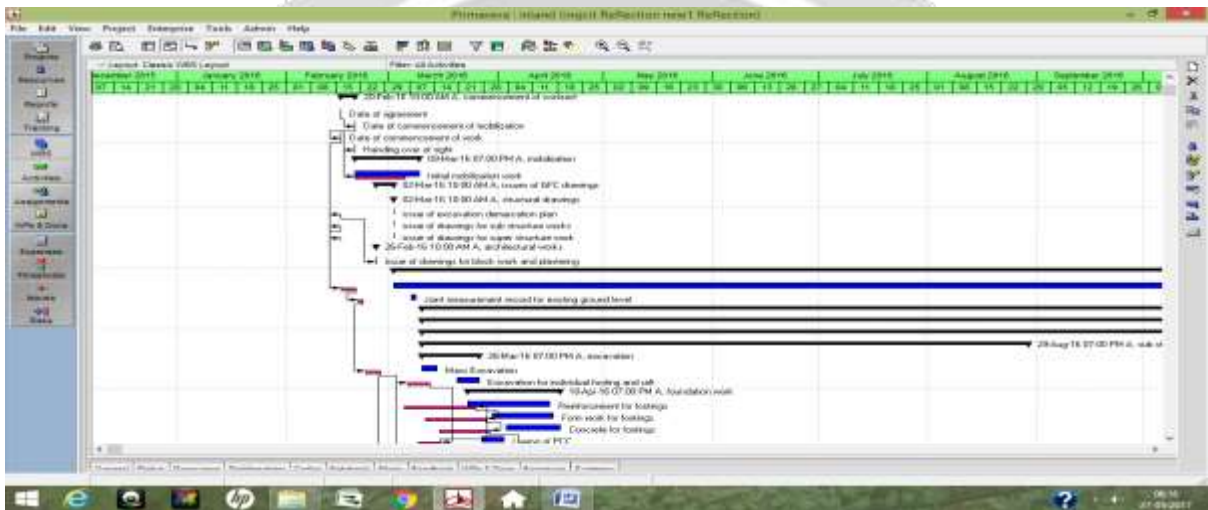


Fig 3 Baseline view of project

Resources are quality and quantity of items required for complete project.

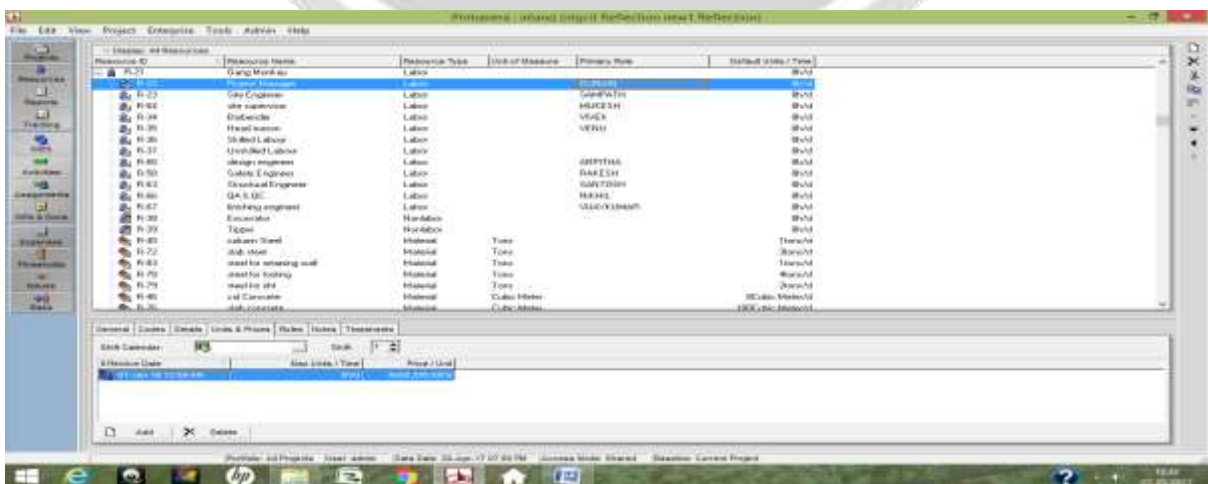


Fig 4 Resource sheet



Updation of project is entering the details of actual progress work of project that is actual start and actual finish.

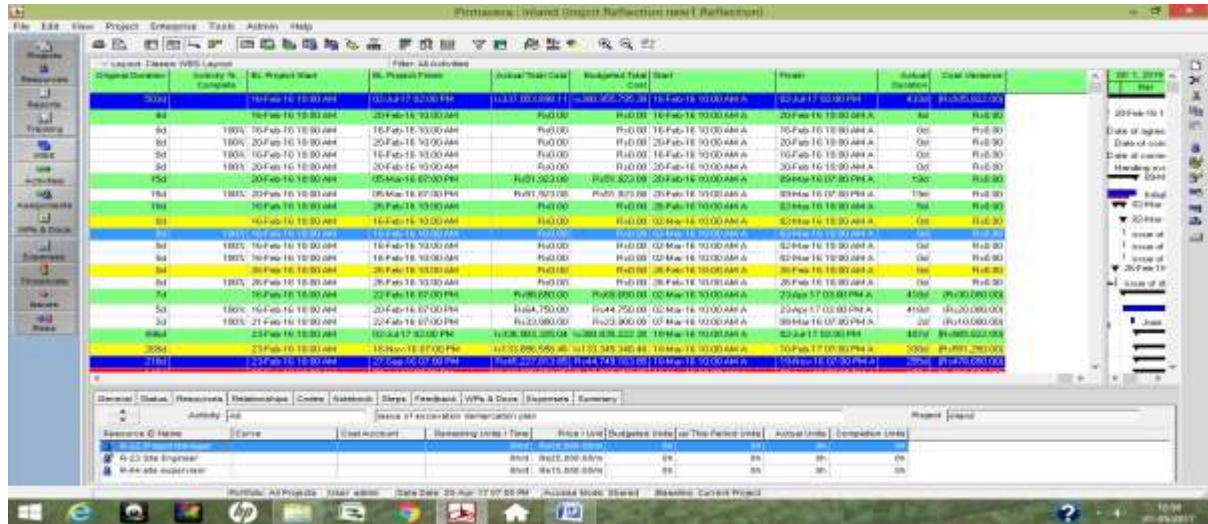


Fig 4 updation of project

When project work progress starts, the next thing in project management is tracking the progress of work going. These details are generally called actual. Tracking is gives project manager up to date information

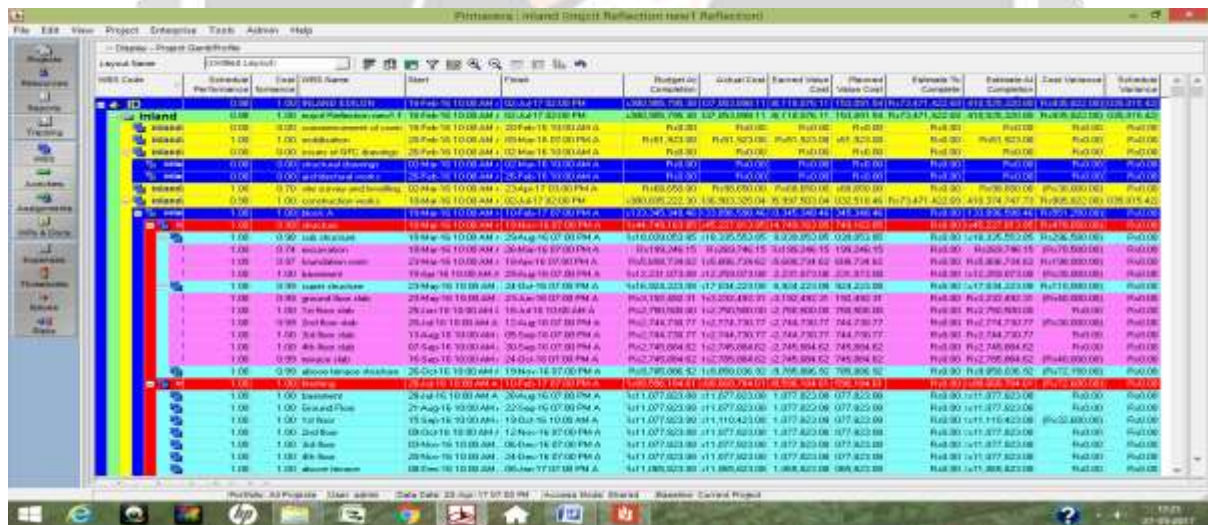


Fig 5 Tracking of project

**5 CONCLUSION**

This project of residential building inland edilon (G+4) is concluded as per planning, scheduling and tracking using earned value analysis with the following statement

As per planned

Project duration =433 days it around one half year



Planned budget = Rs 380955795.38

After updating with day to day progress report up to 28<sup>th</sup> April 2017

Original duration = 503 days

Actual cost = 337053898.11 still the project is progressing

According to results obtained the project is still progressing and delays with around four month as per plan. Earned value analysis using tracking method up to updated date. The results obtained are as follow

Schedule variance = Rs 6035015.42 since it is a negative number this states that project is behind the schedule.

Cost variance = Rs 935,822.00 since it is negative number; this states that project is over budgeted.

At present cost is Rs 337053898 and still it is estimated Rs 410525320.80 at completion.

Performance index such as schedule index and cost index

Schedule performance index = 0.98 Hence it is less than 1, the project is behind the schedule

Cost performance index =1 Hence it is equal to 1, the project is going within budgeted cost.

From all this statement I concluded planning is a very important key function in any sector.

## 6. REFERENCE

- [1] Abhishek Sharma and KK pathak, National institute of technical training and research, Bhopal(M.P) India ,30 November 2015 . “Manpower planning, scheduling and tracking of construction project using Microsoft project software. Journal ofDOI:10.15415/Jotitt.2015.320011
- [2] AA Lakade, A.K Gupta, D.B Desai (2013) “A project management approach using Erp and primavera in construction industry” OSR journal of mechanical and civil engineering (IOSR-JMCE) ISSN: 2278-1684.
- [3] Andrew Fernans Tom, Sachin Paul(2013) “ project monitoring and control using primavera” international journal of innovative research in science, engineering and technology vol.2, issue 3, march2013 ISSN: 2319-8753
- [4] Deepti sahu, A.K Jain department of civil and environmental engineering, NITTR Bhopal (M.P), India. Journal on “resource planning of a colony project using primavera. International journal of innovative research in science engineering and technology An ISO 329:2007 Vol.6 issue1,January 2017
- [5] Mohammed Zakihaider, Rajendra S,Vijak, department of civil engineering, NCET, Bangalore “planning, scheduling, tracking and application administration using primavera” International journal of research in engineering and technology ISSN:2319-1163/ISSN : 2321-7308.
- [6] Shaik Mohammad, Devanand R, Harsha HN, Department of civil engineering, GEC, Hassan “ An analysis on resource planning ,cost estimation ,tracking of project by earned value management IJEIT, ISSN :227-3754 vol.4, issue 4,October 2014.
- [7] PMBOK guide 5<sup>th</sup> edition
- [8] What is project management? Project management institute. pmi. org. retrieved 2014-06-04.
- [9] Unmesh.Y.Polekar ,Rohit.R.Salgude Department of civil engineering (MIT ,Pune) “Planning, scheduling, and tracking of a residential project using primavera software” international journal of advance research in computer science and management studies ISSN:2321-7782 vol.3,issue 5 May 2017.