Abstract

Software engineering includes an important 4Ps concept regarding the productivity, processes, people, and project. Efficiently managing skilled people in Software Project Scheduling (SPS), considering various tasks and software project cost is an upheld task. Scheduling and then making Software cost estimation is composite work for project manager (PM) which consists of many cost drivers and their principles related to 4Ps. In this paper, we considered skilled employees as one of the important 4Ps and an important resource to schedule the cost and calculate the cost of the project along with some constraints of tasks. The paper gives a near-optimal estimated cost of project by using different combination of crossover types and dynamic mutation rated Simple Genetic Algorithm (SGA). The paper also considers the aspects of head count, effort and duration calculated by COCOMO-II. These parameters are used to verify the fitness of each chromosome to get estimated cost by SGA closer to the cost estimated by COCOMOII. The concept of concurrency utilization is included in this paper which satisfies the ultimate aim of project manager or company to get the quality project within minimum time and cost.

- Dr. Larry Bowen. Scheduling algorithms. 2001.
- Pukkala M. Kurttila. Examining the performance of six heuristic optimisation techniques in different forest planning problems. In Trends in Ecology and Evolution.
Research.
- Michele McDonough Venkatraman. Types of task relationships in microsoft project. In Venkatraman, Michele McDonough, Types of Task Relationships in Microsoft Project, pages Lesson–5, August 2011.

Index Terms

Computer Science
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Keywords
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