Software Engineer: Principal Software Engineer

Designs, develops, documents, tests and debugs applications software and systems that contain logical and mathematical solutions. Conducts multidisciplinary research and collaborates with equipment designers and/or hardware engineers in the planning, design, development and utilization of electronic data processing systems for product and commercial software. Determines computer user needs; analyzes system capabilities to resolve problems on program intent, output requirements, input data acquisition, programming techniques and controls; prepares operating instructions; designs and develops compilers and assemblers, utility programs, and operating systems. Ensures software standards are met.

Discretion/Latitude
Works under consultative direction toward predetermined long-range goals and objectives. Determines and pursues courses of action necessary to obtain desired results. Completed work is reviewed for desired results from a relatively long-term perspective.

Knowledge, Skills, and Abilities
Applies advanced technical principles, theories and concepts. Contributes to the development of new principles and concepts. Identifies, analyzes and develops new business opportunities. Answers unusually complex technical questions regarding products and services, and takes part in putting together proposals, configurations and product offerings.

Problem Solving
Works on unusually complex technical problems and provides solutions that are highly innovative and ingenious.

Impact
Develops technological ideas and guides their development into a final product. Erroneous decisions or recommendations would typically result in failure to achieve critical project objectives. Leads the planning and implementation of large projects/programs. Contributes to department goals and planning efforts.

Liason
Serves as organization spokesperson on projects and/or programs. Acts as advisor to management and customers on advanced technical research studies and applications.

Minimum Education and Experience
12+ years with a BS in designated Engineering or a related field. Employees usually have an advanced degree in their field of specialization.