

# Computer Systems Analysts

## Nature of Work:

All organizations rely on computer and information technology to conduct business and operate efficiently. Computer systems analysts help organizations to use technology effectively and to incorporate rapidly changing technologies into their existing systems. The work of computer systems analysts evolves rapidly, reflecting new areas of specialization and changes in technology.

Computer systems analysts solve computer problems and use computer technology to meet the needs of an organization. They may design and develop new computer systems by choosing and configuring hardware and software. They may also devise ways to apply existing systems' resources to additional tasks. Most systems analysts work with specific types of computer systems—for example, business, accounting, or financial systems or scientific and engineering systems—that vary with the kind of organization. Analysts who specialize in helping an organization select the proper system software and infrastructure are often called *system architects*. Analysts who specialize in developing and fine-tuning systems often are known as *systems designers*.

To begin an assignment, systems analysts consult managers and users to define the goals of the system. Analysts then design a system to meet those goals. They specify the inputs that the system will access, decide how the inputs will be processed, and format the output to meet users' needs. Analysts use techniques such as structured analysis, data modeling, information engineering, mathematical model building, sampling, and cost accounting to make sure their plans are efficient and complete. They also may prepare cost-benefit and return-on-investment analyses to help management decide whether implementing the proposed technology would be financially feasible.

When a system is approved, systems analysts determine what computer hardware and software will be needed to set it up. They coordinate tests and observe the initial use of the system to ensure that it performs as planned. They prepare specifications, flow charts, and process diagrams for computer programmers to follow; then they work with programmers to “debug,” or eliminate errors, from the system. Systems analysts who do more in-depth testing may be called *software quality assurance analysts*. In addition to running tests, these workers diagnose problems, recommend solutions, and determine whether program requirements have been met.

## Starting Job Salaries:

- Systems Analysts ranged from \$64,000 to \$87,000
- Business Systems Analysts ranged from \$61,250 to \$86,500
- Developer/Programmer Analysts ranged from \$55,250 to \$90,250

All information comes from the Bureau of Labor Statistics. To learn more about the specific profession visit <http://www.bls.gov/oco/ocos287.htm>.