Software Developer

About my job:
As a software developer, I act as the creative mind behind computer programs. I might develop the applications that allow people to do specific tasks on a computer or I might develop the underlying systems or networks.

What I do every day:
• Modify existing software to adapt to new hardware, or to improve its performance
• Develop and direct software system testing and procedures, programming and documentation
• Coordinate with systems analysts, engineers, programmers and others to design systems and improve capabilities, performance requirements and interfaces
• Evaluate user needs and software requirements to determine feasibility of design, time and cost constraints
• Design, develop and modify software systems
• Store, retrieve and manipulate data for analysis of system capabilities
• Oversee the work of programmers, technologists and technicians
• Coordinate software system installation and monitor equipment functioning to ensure specifications are met
• Obtain and evaluate information on reporting formats required, costs and security needs
• Develop and comply with corporate security guidelines

What makes my job great?

Job growth:
Employment of software developers is projected to grow 22 percent from 2012 to 2022, due to the large increase in the demand for computer software.

Short-term training:
Software developers usually have a bachelor’s degree in computer science and strong programming skills.

Good pay:
The median salary is $73,400 per year. (That means that 50 percent of software developers earn less and the other 50 percent earn more.)

Benefits:
Most software developers work full time with benefits that may include:
• Healthcare
• Paid vacation
• Flexible schedule and location
• Tuition assistance
How can you become a software developer?

**Academic/training credentials:**
Bachelor’s degree with programming experience.

**Other credentials:**
Most software developers earn a bachelor’s degree in computer science or software engineering. Software engineers who complete an ABET accredited software engineering program may be registered as a professional engineer (P.E.).

**Work experience/internships:**
Internship opportunities provide students with relevant experience to help them get hired. Others begin work as computer programmers and advance to careers in software development.

**Skills and requirements:**
- Computer programming skills
- Problem solving skills
- Excellent attention to detail
- Strong verbal and written communication skills
- Knowledge of system development lifecycle
- Data modeling skills
- Relevant work experience

**Potential job titles:**
- Programmer analyst
- Software development engineer
- Data modeler
- Software architect
- Software developer
- Applications developer
- Business systems analyst

**Where you can find jobs:**
- Online job boards
- Social media
- Information technology recruiting firms
- Career fairs
- Networking with family, friends and teachers
- IT consulting firms
- Company websites
- Department of Career Services at colleges

**Potential local employers:**
- the Cleveland Clinic
- Cornerstone Technology
- CyberCoders
- Key Bank
- Parker-Hannifin
- Progressive Insurance
- Sherwin-Williams.
Local educational opportunities

Two-year institutions:

- Lakeland Community College: Associate of Applied Business Computer Science/Software Engineering Concentration
- Lakeland Community College: Associate of Applied Business Computer Science/Application Programming and Development Concentration
  - IT specialist certificate
  - IT professional certificate
Contact Lakeland Information Technology & Computer Science Department Chair at 440.525.7265.
- Cuyahoga Community College: Associate of Applied Business in Information Technology: Programming and Development

Four-year institutions:

- Holden University Center of Lakeland Community College/Kent State University: Bachelor of Technical and Applied Studies, Computer Technology General Concentration
- Cleveland State University: Bachelor of Science in computer and information science
- Kent State University: Bachelor of Science in Computer Science
- University of Akron: Bachelor of Science in Computer Science

High School Tech Prep:

- Auburn Career Center: information support and services program
- A Tech: computer information systems program
- Lake Shore Compact: computer information systems program
- Excel TECC: information technology and programming program
- Contact your high school guidance office

Coursework per educational entity:

Secondary pathway:
Computer Information Technology

Postsecondary program:
Programming and Software Development

An Example of Course with Secondary and Postsecondary Credits
How can I grow my career?

A software developer requires a bachelor’s degree in computer science or other technical degree. Additional work experience as a computer programmer is also helpful.

Where could I focus or specialize in my career?

- Computer user support specialist
- Computer programmer
- Database administrator
- Computer and information systems manager
- Project manager

The career ladder

Pre-IT training
- Worksite visits
- Job shadowing

2-year programming and development degree
- Computer user support specialist
- Entry level computer programmer
- $43,000 annual salary

4-Year IT/CS degree
- Computer programmer
- Software developer
- $73,000 annual salary

4-Year IT/CS degree and work experience
- IT project manager
- Computer systems manager
- $100,000 annual salary

Sources/References:
O*Net Online-Summary Report, Ohio Labor Market Information