Programming Merit Badge - Prereq. Worksheet

Scout Name (First Last): _____ **Troop:** _____ **Date:** _____

Instructions: To maximize our hands-on coding time during the workshop, you must complete this worksheet prior to attending. **All answers must be written in full, complete sentences.** Single words or fragmented sentences will not be accepted.

Requirement 1b: Cyber Safety

Task: View the personal safety awareness video (Protect Yourself Rules) **for your current rank**.

Video Link:
https://www.scouting.org/training/youth/scouts-bsa/

Requirement: You **MUST** watch this video together with a parent or guardian, not alone.

- ☐ **I have watched the appropriate safety video with my parent/guardian.**

Requirement 2: History of Programming

Task: Research the history of programming. Describe three milestones related to the advancement or development of programming over time. (Write in full sentences **include dates**).

1. _____

   _____

   _____

2. _____

_____

_____

3. _____

_____

_____

Requirement 3: General Knowledge

Task (a): List five popular programming languages and describe their primary industries and why they are used.

Example Industries: Enterprise Software, Android Development, Banking, E-Commerce, Game Development, Enterprise Applications, FinTech, Data Science, AI/ML, Web Development, Finance, Education

- **1.** Language Name: _____ Industries: _____
- **2.** Language Name: _____ Industries: _____
- **3.** Language Name: _____ Industries: _____
- **4.** Language Name: _____ Industries: _____
- **5.** Language Name: _____ Industries: _____

Task (b): Describe three different programmed devices relied on every day.

Write the name of the device then describe what it does and why you use it every day

1. _____

_____

2. _____

_____

3. _____

_____

Requirement 4: Intellectual Property

Task: Define the following terms in your own words using full sentences.

- **Intellectual Property (IP):** _____

_____

- **Copyright:** _____

_____

- **Patent:** _____

_____

- **Open-Source:** _____

_____

- **Freeware:** _____

  _____

- **Shareware:** _____

  _____

- **Owning Software (VS) Licensing Software:** _____

_____

_____

Requirement 6: Career Exploration

Task: Explore careers related to this merit badge. Research one career to learn about the training and education needed, costs, job prospects, salary, job duties, and career advancement. Your research methods may include—with your parent or guardian's permission—an internet or library search, an interview with a professional in the field, or a visit to a location where people in this career work. Discuss with your counselor both your findings and what about this profession might make it an interesting career.

Chosen Career: _____

- **Training & Education Needed:** _____

  _____

- **Estimated Costs of Training/Education:** _____

  _____

- **Job Prospects & Expected Salary:** _____

  _____

- **Day-to-Day Job Duties:** _____

  _____

- **Career Advancement Opportunities:** _____

  _____

- **Why This Profession Is Interesting to Me:** _____

  _____

  _____

Verification Sign-Off

By signing below, the Scout confirms that they completed this research independently and in full sentences. The Parent/Guardian confirms that they reviewed this work and watched the required Cyber Safety video alongside the Scout.

Scout Signature: _____ **Date:** _____

Parent/Guardian Signature: _____ **Date:** _____