**Demonstration3:**

**def get\_score(question):**

**while True:**

**try:**

**score = int(input(f"{question} (Rate from 1 to 5): "))**

**if 1 <= score <= 5:**

**return score**

**else:**

**print("Please enter a score between 1 and 5.")**

**except ValueError:**

**print("Invalid input. Please enter an integer from 1 to 5.")**

**reliability\_questions = [**

**"Does the software handle unexpected input gracefully?",**

**"Does it recover from crashes or errors automatically?",**

**"Is the software available and responsive under load?",**

**"Does it produce consistent results every time?",**

**"Are bugs rarely encountered during usage?"**

**]**

**maintainability\_questions = [**

**"Is the code modular and easy to modify?",**

**"Is the documentation sufficient and updated?",**

**"Can new developers understand the code easily?",**

**"Are changes easy to implement without breaking existing code?",**

**"Is version control and CI/CD integrated?"**

**]**

**usability\_questions = [**

**"Is the user interface intuitive and user-friendly?",**

**"Is navigation within the application smooth?",**

**"Are error messages clear and helpful?",**

**"Can the user perform key tasks with minimal guidance?",**

**"Is there proper help and support documentation?"**

**]**

**def evaluate\_category(name, questions):**

**print(f"\n--- Evaluating {name} ---")**

**total = 0**

**for q in questions:**

**total += get\_score(q)**

**avg\_score = total / len(questions)**

**return avg\_score**

**def mccall\_quality\_evaluation():**

**print("Welcome to McCall’s Quality Model Evaluation\n")**

**print("Please answer the following questions to evaluate the software.\n")**

**reliability\_score = evaluate\_category("Reliability", reliability\_questions)**

**maintainability\_score = evaluate\_category("Maintainability", maintainability\_questions)**

**usability\_score = evaluate\_category("Usability", usability\_questions)**

**print("\n--- Quality Assessment Summary ---")**

**print(f"Reliability Score: {reliability\_score:.2f} / 5")**

**print(f"Maintainability Score: {maintainability\_score:.2f} / 5")**

**print(f"Usability Score: {usability\_score:.2f} / 5")**

**overall = (reliability\_score + maintainability\_score + usability\_score) / 3**

**print(f"\nOverall Quality Score: {overall:.2f} / 5")**

**if overall >= 4:**

**level = "Excellent"**

**elif overall >= 3:**

**level = "Good"**

**elif overall >= 2:**

**level = "Fair"**

**else:**

**level = "Poor"**

**print(f"Quality Level: {level}")**

**if \_\_name\_\_ == "\_\_main\_\_":**

**mccall\_quality\_evaluation()**

**output:**

**Welcome to McCall’s Quality Model Evaluation**

**Please answer the following questions to evaluate the software.**

**--- Evaluating Reliability ---**

**Does the software handle unexpected input gracefully? (Rate from 1 to 5): 1**

**Does it recover from crashes or errors automatically? (Rate from 1 to 5): 2**

**Is the software available and responsive under load? (Rate from 1 to 5): 3**

**Does it produce consistent results every time? (Rate from 1 to 5): 4**

**Are bugs rarely encountered during usage? (Rate from 1 to 5): 5**

**--- Evaluating Maintainability ---**

**Is the code modular and easy to modify? (Rate from 1 to 5): 5**

**Is the documentation sufficient and updated? (Rate from 1 to 5): 5**

**Can new developers understand the code easily? (Rate from 1 to 5): 5**

**Are changes easy to implement without breaking existing code? (Rate from 1 to 5): 5**

**Is version control and CI/CD integrated? (Rate from 1 to 5): 5**

**--- Evaluating Usability ---**

**Is the user interface intuitive and user-friendly? (Rate from 1 to 5): 5**

**Is navigation within the application smooth? (Rate from 1 to 5): 5**

**Are error messages clear and helpful? (Rate from 1 to 5): 5**

**Can the user perform key tasks with minimal guidance? (Rate from 1 to 5): 5**

**Is there proper help and support documentation? (Rate from 1 to 5): 5**

**--- Quality Assessment Summary ---**

**Reliability Score: 3.00 / 5**

**Maintainability Score: 5.00 / 5**

**Usability Score: 5.00 / 5**

**Overall Quality Score: 4.33 / 5**

**Quality Level: Excellent**