



Florida International University

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PROBLEM

Individuals preparing for technology and cybersecurity professions often face limited free of cost practical training and skill-building activities in critical areas. This shortage impacts their ability to fully prepare for professional credentials like industry-standard certifications.

CONTRIBUTION

Content Curation: Carefully sourced and developed high-quality content tailored to the CompTIA A+ 1102 certification, ensuring it aligns with industry standards and remains accurate and relevant .Assessment Development: Created detailed assessments enriched with key facts and insights Reliability Testing: Conducted multiple deployments of assessments to validate their accuracy and alignment with CompTIA test core objectives,

SUMMARY

Students preparing for IT certifications, especially the CompTIA 1102 exam, can gain a significant advantage with a free online test resource. This platform delivers confidence-boosting exercises in essential technical skills, equipping learners for both certification success and thriving industry careers. It lays a solid foundation for credentials like CompTIA A+ and Security+, setting students on a path to achieve their professional goals.

SYSTEM DESIGN

User Interaction: Students engage with the test using provided resources to enhance knowledge and build confidence
Platform: Hosted on a Virtual Machine for a realistic, hands-on experience.
Environment: Includes scenarios based on real CompTIA 1102 questions, aligning with certification standards.

OBJECT DESIGN

Terminal Navigation Tasks: Exercises that guide students through operating and executing functions on Linux and Windows systems.
Coding Exercises: Challenges focused on creating scripts using languages such as Python, Bash, and Java.
Cybersecurity Activities: Hands-on projects to configure, examine, and protect network systems.

REQUIREMENTS

- Windows
- Enable virtualization in BIOS settings
- Software:
- VirtualBox
- Python
- VMWare
- Any other hypervisor for virtualization

IMPLEMENTATION

Content Curation:

- Researched and identified high-quality, up-to-date resources aligned with CompTIA A+ 1102 certification standards.

Assessment

Development: Designed with python an engaging and informative assessment with facts and questions that reinforce technical concepts.

Reliability Testing:

Reviewed user feedback and adjusted the assessments to ensure alignment with

```
import time
import sys
import os

score = point = 0.0

intro = "This is your gateway to mastering The 1102 this exam focuses on operating systems, security, and networking. To earn your CompTIA A+ certification, you must score at least 675 out of 900 on this exam and so to sharpen your skills take this test and read the facts provided"

def intro_message(intro):
    for char in intro:
        sys.stdout.write(char)
        sys.stdout.flush()

        if char != "\n":
            time.sleep(0.1)
        else:
            time.sleep(1)
    os.system("cls")
    intro_message(intro)

def facts():
    while True:
        print("\n< CompTia A+ 1102 facts part one (1)>")

guesses = []
score = 0
question_num = 0

for question in questions:
    print("-----")
    print(question)

    for option in options[question_num]:
        print(option)
    guess = input("Input your Multiple choice Answer : ").upper()
    guesses.append(guess)

    if guess == answers[question_num]:
        score += 1
        print("CORRECT!!")
    else:
        print(f"Wrong! The correct answer is {answers[question_num]}")

    question_num += 1

print("-----")
score = (score / len(questions)) * 100
print(f"your score is: {score}% ")
print(f"out of 50 question you got {score}/{len(questions)} correct")
```