



2026 - 2027

Information Technology: Software and Web Development

Associate in Applied Science Degrees

MULTIPLE LOCATIONS

| VARIED SEMESTER LENGTHS

| NUMEROUS PROGRAMS

| FINANCIAL AID

The image shows a student's perspective of a laptop screen displaying Python code for a Flask application. The code is split into two panels: 'app.py' on the left and 'items.py' on the right. The 'app.py' panel shows imports for Flask, SQLAlchemy, and models, followed by route definitions for home, answer, and helper functions. The 'items.py' panel shows step implementations for navigating the application, including assertions for element presence and clicks. A QR code is overlaid in the bottom right corner of the image.

```
~/Documents/repos/thinkful-mentor/FlashcardsMVP/features/steps/items.py — FlashcardsMVP  
app.py  
1 import random  
2 from flask import Flask, render_template, \br/>3 abort, url_for, flash  
4 from flask.ext.sqlalchemy import SQLAlchemy  
5  
6 app = Flask(__name__)  
7 app.config.from_object('config')  
8 db = SQLAlchemy(app)  
9  
10 from models import Answer, Question  
11  
12  
13 # routes  
14 @app.route('/', methods=['GET'])  
15 def home():  
16     question = get_question()  
17     options = get_options(question)  
18     return render_template('home.html', question=question, options=options)  
19  
20  
21 @app.route('/answer/<int:answer_id>/<string:question>')  
22 def answer(answer_id, question):  
23     updated_question = (str(question))  
24     answer_query = db.session.query(Answer).filter(Answer.answer_id ==  
25         answer_id).first()  
26     question_query = db.session.query(Question).filter(Question.description ==  
27         updated_question).first()  
28     right_answer = db.session.query(Question).filter(Question.description ==  
29         updated_question).first()  
30     answer = get_correct_answer(right_answer)  
31     if answer_query.question_id == question_query.question_id:  
32         correct = flash("Correct!")  
33         return render_template('check.html', correct=correct)  
34     else:  
35         incorrect = flash("Wrong. The correct answer is {}".format(right_answer.description))  
36         return render_template('check.html', incorrect=incorrect)  
37  
38 # helper functions  
39 def get_question():  
40     rand = random.randrange(0, db.session.query(Question).count())  
41     question = db.session.query(Question)[rand]  
42     return question  
43  
44 def get_options(question):  
45     return db.session.query(Answer).filter(Answer.question_id == question.id).all()
```

```
items.py  
1 @when(u'I go to the homepage')  
2 def step_impl(context):  
3     br = context.browser  
4     br.get('http://localhost:5000')  
5  
6 @then(u'I should see a question')  
7 def step_impl(context):  
8     br = context.browser  
9     assert br.find_element_by_id('question')  
10  
11 @then(u'I should see three options')  
12 def step_impl(context):  
13     br = context.browser  
14     assert br.find_element_by_class_name('answer')  
15  
16 @then(u'I should see three buttons')  
17 def step_impl(context):  
18     br = context.browser  
19     assert br.find_element_by_class_name('answer-button')  
20  
21 @when(u'I click a button')  
22 def step_impl(context):  
23     br = context.browser  
24     br.find_element_by_class_name('answer-button').click()  
25  
26 @then(u'I should see a message')  
27 def step_impl(context):  
28     br = context.browser  
29     assert br.find_element_by_class_name('flash-answer')  
30  
31 @when(u'I click the next question button')  
32 def step_impl(context):  
33     br = context.browser  
34     br.find_element_by_class_name('next').click()  
35  
36 @when(u'I go to the homepage')  
37 def step_impl(context):  
38     br = context.browser  
39     br.get('http://localhost:5000')  
40
```

Scan Code for program page online



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Information Technology: Software and Web Development

The Software and Web Development curriculum prepares graduates for careers in the information technology arena using computers and mobile devices to disseminate and collect information via the Internet.

Course work in this program covers the terminology and use of computers, Internet-ready devices, servers, databases, programming languages, as well as Internet applications, site development and design. Studies will provide opportunity for students to learn related industry standards.

Graduates should qualify for career opportunities as designers, administrators, or developers in the areas of Internet and mobile applications, websites, web services, and related areas of Internet technologies. Credit for specific Information Technology certificate may replace some courses: abtech.edu/current-students/programing-advising-center-overview/credit-prior-learning

Salary Range: \$35,000-\$53,408 (Salaries may vary based on size of business and other factors).

Specific Requirements

- General college admission requirements must be met.
- Transfer credit will not be accepted for DBA-120, WEB-115, WEB-182, WEB-210, WEB-250, and WEB-289.

Total Cost Estimate

Tuition per Semester (NC Resident)	\$1,216.00 (16+ credit hours) \$76.00/credit hour (1-15 hours)
Computer Use and Technology Fee	\$48/semester
Activity Fee	Fall and Spring semesters only, Main campus and Online, \$45.00
CAPS Fee (Campus Access, Parking and Security)	\$30/semester
Matriculation Fee	\$25/semester
Student Insurance	\$2/Semester

Additional Fees including books may incur, please check A-B Tech website for more detail: <https://abtech.edu/program/information-technology-software-and-web-development-aas-cost-estimate>

Have you applied for Financial aid? Please visit A-B Tech website for instructions: <https://abtech.edu/future-students/financial-aid/applying-aid>

For More Information:

Contact Peter Kennedy by email at peterukennedy@abtech.edu or by phone at 828-398-7289.

Advising questions? Email: advising@abtech.edu

Courses requiring a grade of "C" or better: ACA, CIS, CSC, CTI, CTS, DBA, GIS, WBL, WEB

	Course Prefix	Course Name	Credit Hours
First Semester (Fall)	ACA 115	Success and Study Skills	1
	CIS 115	Intro to Prog & Logic	3
	CSC 113	Artificial Intel. Fundamentals	3
	CTI 110	IT Foundations	3
	ENG 111	Writing and Inquiry	3
	WEB 115	Web Markup and Scripting	3
Second Semester (Spring)	DBA 120	Database Programming I	3
	MAT 110	Mathematical Measurement	3
	WEB 111	Intro to Web Graphics	3
	WEB 182	PHP Programming	3
	WEB 210	Web Design	3
Third Semester (Summer)	COM 231	Public Speaking	3
	CTS 115	Info Sys Business Concepts	3
	DBA 210	Database Administration	3
Fourth Semester (Fall)	ART 111	Art Appreciation	3
	WEB 125	Responsive Web Frameworks	3
	WEB 215	Adv Markup and Scripting	3
	WEB 225	Content Management Sys	3
	WEB 250	Database Driven Websites	3
Fifth Semester (Spring)	CTI 120	Network & Sec Foundations	3
	PSY 150	General Psychology	3
	WEB 213	Internet Mkt & Analytics	3
	WEB 289	Web Dev Capstone Project	3
		Pathway Option	3
Program Totals:			70

Pathway options: CSC 121, CSC 134, CSC 151, GIS 111, WBL 212/215

Certificate Available:

Front-End Developer Certificate

Back-End Developer Certificate

Database Management Certificate

For more information, please visit:

<https://abtech.edu/programs/academic/computer-information-technology>