

Congratulations! You passed!

Grade received **86.66%**

Latest Submission Grade 86.67%

To pass 80% or higher

[Go to next item](#)

You reached new skill levels

Statistical Programming

Your score: **226** (↑226) Intermediate

Well done! At an intermediate level, you have a solid understanding of the material and are able to pass intermediate content. You can apply key concepts on most tasks.



SQL

Your score: **67** (↑34) Beginner

Keep going! At a beginner level, you have a working knowledge and are able to pass beginner content. You have limited experience applying it.



[Show more skills](#)

1. Which of these are essential characteristics of the Cloud? Select the two characteristics that apply.

1 / 1 point

- Limited service
 Broad network access

✓ Correct

One essential characteristic of the cloud is broad network access: cloud computing resources can be accessed via the network through standard mechanisms and platforms.

- Static access
 Resource pooling

✓ Correct

One essential characteristic of the cloud is resource pooling, is what gives cloud providers economies of scale, which they pass on to their customers, making cloud cost-efficient.

[Expand](#)

✓ Correct

Great, you got all the right answers.

2. In the _____ cloud model, the cloud provider provisions the cloud infrastructure for exclusive use by a single organization.

0 / 1 point

- Private
 Public
 Hybrid multicloud
 Hybrid

[Expand](#)

✗ Incorrect

Refer to the Definition and Essential Characteristics of Cloud Computing video.

3. Which of the following is a benefit of using virtual machines? Select the two statements that apply.

1 / 1 point

- Virtual machines do not need guest OSs.
 Virtual machines under the host all depend on each another.

 Virtual machines are portable between different physical servers.

 **Correct**

You can move a virtual machine from one hypervisor to another hypervisor on a different physical server almost instantaneously.

 Virtual machines can run different operating systems under the same host.

 **Correct**

Because virtual machines are independent, you can run different operating systems on different virtual machines.

 **Expand**

 **Correct**

Great, you got all the right answers.

4. Which of the following is true about containers?

1 / 1 point

- Containers consume fewer resources than virtual machines.
- Containers must include a guest OS in every instance.
- Containers are heavier weight than virtual machines.
- Containers use hypervisors in all cases.

 **Expand**

 **Correct**

Unlike virtual machines, containers do not need to include a guest operating system in every instance, reducing the resource requirements.

5. Which type of cloud storage is presented to compute nodes using high-speed fiber connections?

1 / 1 point

- Direct
- Block
- Object
- File

 **Expand**

 **Correct**

Block storage is presented to compute nodes using high-speed fiber connections, which means that read and write speeds are typically much faster and reliable than with file storage.

6. Front-end developers use HTML to do which of the following to a website?

1 / 1 point

- Perform data analysis on the website
- Create the physical structure of the website
- Add interactivity to the website
- Manage styles on the website

 **Expand**

 **Correct**

Front-end developers use HTML to create the website's physical structure, including elements such as text, links, images/videos, page dividers, and buttons.

7. Which of the following best describes a route?

1 / 1 point

- Web address or URL for a website
- Code that works with data when processing requests from the front-end
- Path to a website or page that the user interacts with
- Method for creating style sheets faster and more easily

 Expand



 Correct

A route is a path to a website or page that the user interacts with. Routes generally take user input and show results based on the input.

8. Which HTML element should you use to define a document's logical separations, such as the numbered chapters of an online manual?

0 / 1 point

- <article>
- <nav>
- <section>
- <canvas>

 Expand



 Incorrect

Refer to the HTML5 Tags and Structural Elements video.

9. In JavaScript, which of the following is a primitive data type? Select the two choices that apply.

0 / 1 point

- Base
- Object

 This should not be selected

Refer to the JavaScript Language: Overview and Syntax video.

- Undefined

 Correct

Undefined is one of the five primitive data types in JavaScript.

- Null

 Correct

Null is one of the five primitive data types in JavaScript.

 Expand



 Incorrect

You chose the extra incorrect answers.

10. In JavaScript, assume you need to create a variable with global scope and whose value will never change. What is the first step you must take to declare this variable?

1 / 1 point

- Providing the data type
- Providing the var keyword
- Providing the variable name
- Providing the Dim statement

 Expand



 **Correct**

In JavaScript, to declare a variable with global scope and whose value will never change, provide the var keyword, then the variable name.

11. Which of the following is a popular web-hosted service for Git repositories?

1 / 1 point

- Visual SourceSafe
- SCM Anywhere
- Concurrent Versions System
- Beanstalk



 **Expand**

 **Correct**

One popular web-hosted service for Git repositories is Beanstalk.

12. What is one purpose for using repositories?

1 / 1 point

- Storing documents for a project
- Providing local working directories for a project
- Viewing snapshots of a project
- Securing remote login to access a project

 **Expand**



 **Correct**

A repository is a data structure for storing documents, including application source code.

13. Assume you are a developer on a GitHub project, and on your computer, you have a cloned copy of the GitHub repository. After editing several files in your local repository, what is the first step you must take to push your changes back to GitHub?

1 / 1 point

- Delete your working directory.
- Create a new master branch.
- Use the add command.
- Update the README file.

 **Expand**



 **Correct**

When ready to push your changes back to GitHub, you must first run the git-add command on the changed files. This command moves the files into a staging area.

14. Which of the following Git commands fetches and tries to automatically merge changes from the remote repository to your local repository?

1 / 1 point

- git-push
- git-fetch
- git-merge
- git-pull

 **Expand**



 **Correct**

The git-pull command fetches and tries to automatically merge changes from the remote repository to your local repository.

15. In a Git team project, which team member uses the git-am command as part of their responsibilities?

1 / 1 point

- Billing manager
- Repository administrator
- Integrator
- Developer

 Expand

 Correct

An integrator uses the git-am command to apply patches emailed in from project contributors.

16. The cloud native application stack consists of four different layers: application runtime; application and data services; scheduling and orchestration; and cloud infrastructure. The _____ layer defines the underlying environment.

0 / 1 point

- Application runtime
- Application and data services
- Cloud infrastructure
- Scheduling and orchestration

 Expand

 Incorrect

Refer to the Cloud Native Applications video.

17. What is the second step in test-driven development?

1 / 1 point

- Develop just enough code to make the test pass
- Write a test case and watch it fail
- Refactor the code to improve it
- Add abstractions to the code

 Expand

 Correct

Test-driven development follows the red-green-refactor pattern. The second step is to develop just enough code to make the test pass.

18. The process of refactoring and breaking down large legacy applications into a collection of small, loosely coupled microservices that can be aligned to a feature or a business function is called what?

1 / 1 point

- Strangling the monolith
- Containerization
- Lift and shift
- Operational optimization

 Expand

 Correct

Correct. Moving the large application piece by piece is referred to as "strangling the monolith."

19. Which of the following is a characteristic of legacy computing?

1 / 1 point

- Stateful applications
- Continuous integration
- Easy scalability
- Hybrid cloud

 Expand

 Correct

Legacy computing involves monolithic applications, which rely on load balancing and stateful applications to spread user workloads across multiple servers.

20. IBM Watson uses Natural Language Classifier (NLC) – what does NLC do?

1 / 1 point

- Applies linguistic analytics to detect joy, fear, sadness, anger, analytical, confident, and tentative tones found in text
- Uses deep learning algorithms to identify scenes, objects, and faces
- Converts the human voice into written words
- Identifies sentences or phrases into types and predict answers or next steps

 Expand

 Correct

Correct. NLC combines various advanced ML techniques to classify text into custom categories at scale.

21. JSON is the standard format for API data exchange. What relationship does JSON have with Node.js?

1 / 1 point

- JSON_SET
- Common data model folder
- Standard representation of native JavaScript objects
- Metadata file

 Expand

 Correct

Correct. JSON represents objects that can be processed and routed by Node.js

22. Which of the following is not a package used to build React applications?

1 / 1 point

- React
- JSX
- ReactDOM
- Babel

 Expand

 Correct

Correct. JavaScript XML (JSX) is a special markup language that resembles HTML.

23. To make a function or a value available to Node.js applications that import your module, you should:

0 / 1 point

- Call require with the name of a subdirectory
- Add a property to the implicit exports object
- Use the require function with a relative path to the script file
- Do nothing – it happens automatically



Expand

Incorrect

Incorrect. Refer to the Working with Node.js Modules video.

24. What is a promise?

1 / 1 point

- An object returned by an asynchronous method
- A catch block
- An asynchronous method
- A blocked resource



Expand

Correct

Correct. Promises are most useful for operations that are time consuming and can block resources.

25. Which of the following is not a type of middleware?

1 / 1 point

- Application level
- Router level
- Branching
- Error handling

Expand

Correct

Correct. Five types of middleware are application level, router level, error handling, built-in, and third party.



26. Some of the common Docker CLI commands include _____ to create a new image and _____ for testing developed images.

1 / 1 point

- image, build
- push, pull
- run, build
- build, run

Expand

Correct

Correct. These are the correct commands for the listed operations.



27. Which of these is true of Kubernetes?

1 / 1 point

- Provides logging, monitoring, and alerting solutions
- Provides a flexible model that maintains choice for users wherever appropriate.
- Provides continuous integration/continuous deployment pipelines to build applications or deploy source code

Deploy source code

- Limits the types of applications that can run on it

 Expand

 Correct

Correct. Kubernetes can accommodate a variety of applications, languages, and frameworks.

28. Which command in a Dockerfile provides a default for executing a container, and there can only be one in the file?

1 / 1 point

- FROM
 RUN
 CMD
 ADD

 Expand

 Correct

Correct. This is the command that can execute a container, and there is always only one.

29. Which of the following statements is incorrect?

1 / 1 point

- "Kube-system" is a user-created namespace for objects
 The get command lists all the deployments that are present in the kube-system namespace.
 When the apply command is run, the state of the targeted Kubernetes cluster is made to match the state that's defined in the provided files.
 The describe command shows details about a specific resource or group of resources.

 Expand

 Correct

Correct. This namespace is created by the Kubernetes system; it's not a user-created namespace.

30. What is Red Hat OpenShift?

1 / 1 point

- A narrowly focused utility that provides a few services
 A crucial component of Kubernetes
 A project, not a product
 A hybrid cloud, enterprise Kubernetes application platform

 Expand

 Correct

Feedback: Correct. OpenShift builds on open-source Kubernetes to create an application platform.

31. What is the result of running the following lines of code?

1 / 1 point

```
1 class Points(object):  
2     def __init__(self,x,y):  
3         self.x=x  
4         self.y=y  
5     def print_point(self):  
6         print('x=',self.x,' y=',self.y)  
7 p1=Points("Q","Z")  
8 p1.print_point()
```

x=Q y=Z

x=Q

y=Z

 Expand

 Correct

Correct. The variables have been assigned and printed.

32. Web scraping is a process used for automatically extracting information from a website within minutes. What is the purpose of the Python code provided below in web scraping?

1 / 1 point

"table_row=table.find_all(name='kr')"

- It will find all the data within the table marked with a tag "all."
- It will find all the rows within the table.
- It will find all the columns within the table marked with a tag "all."
- It will find all the data within the table marked with a tag "kr."

 Expand

 Correct

Feedback: Correct! find_all() is a method in the table object that will identify tags in a table with the name parameter passed into it.

33. What value of x will produce the following output? Select the three statements that apply.

0 / 1 point

Bye

Hillary

```
1 if(x=="B"):
2     print('Hello')
3 else:
4     print('Bye')
5     print('Hillary')
```

x="B"

! This should not be selected

Incorrect! x="B" matches the if statement condition.

x=B

x="Bye"

 Correct

Correct! x="Bye" does not match the if statement condition.

x=Bye

 Expand

 Incorrect

You didn't select all the correct answers

34. To append text to a file, which mode argument should be passed into the open() function?

1 / 1 point

'w'

'o'

'r'

'a'



a

Expand**Correct**

Correct! The correct format is open(path, 'a').

35. Which of the following statements is true about tuples and lists?**1 / 1 point**

- Tuples and lists are both ordered sequences.
- Tuples and lists are both immutable.
- Tuples and lists are both unordered.
- Tuples and lists are both mutable.

**Expand****Correct**

Correct! Tuples and lists are both ordered sequences but tuples are immutable whereas lists are mutable.

36. Which statement about an entity-attribute model regarding a movie is true?**1 / 1 point**

- The movie is a column.
- The movie is a row.
- The movie is an attribute.
- The movie is an entity.

**Expand****Correct**

Correct! An entity is the subject of focus.

37. What is the purpose of using a Django template?**1 / 1 point**

- It is an alternative to the entity-relationship model for rendering data.
- It converts static HTML to dynamic HTML.
- When combined with Django views, it presents data as a dynamic HTML page.
- It can easily be mapped to a relational database.

**Expand****Correct**

Correct! "Django uses a template to generate dynamic Web pages that are sent back and rendered in a user's browser."

38. When you create a Django project, Django creates some core files, including manage.py. What purpose does manage.py serve?**1 / 1 point**

- It provides a command line interface so you can interact with the Django project.
- It creates markdown elements.
- It contains the settings and configurations for your Django project.
- It contains the URL and routing definitions of your Django app.

Expand



Correct

Correct! manage.py is a command line interface used to interact with the Django project to start the server, migrate models, and so on.



39. Which of the following describes one of the two types of containers in Bootstrap?

1 / 1 point

It creates a card-grid.

It spans the entire width of the parent element.

It displays tabular data.

It has variable width.

Expand



Correct

Correct! One of the two types of containers is container-fluid, which spans the entire width of the parent element.



40. Which statement is true regarding object-relational mapping?

1 / 1 point

ORM bridges the gap between OOP and SQL.

A change in the database only require changes to the data access logic but not to the application logic.

ORM usually makes debugging simpler than SQL.

ORM utilizes lookup tables to access data.

Expand



Correct

Correct! Developers can use just one programming paradigm development.



41. What is the purpose of the twelve-factor app methodology?

1 / 1 point

To compile the code, gather dependence information, and transform the codebase into an executable unit called a build

To ensure that applications are ready for cloud-native deployment

To make sure the app is contained in a single codebase

To group the code, deploy, and operate phases of the software delivery lifecycle

Expand



Correct

Correct! Twelve-factor app methodology is designed to ensure that applications are ready for cloud-native deployment.



42. FaaS is considered the originating technology in the serverless category. Which part of the serverless stack does FaaS represent?

1 / 1 point

Data layer

Communication layer (messaging)

Core compute and processing engine

Storage

Expand

 **Correct**

Correct! FaaS represents the core, serverless compute and processing engine and sits in the center of most serverless architectures.

43. Which statement best describes OpenShift?

1 / 1 point

- It is an IT architecture that incorporates workload portability, orchestration, and management.
- It is a dedicated layer for making service-to-service communication secure and reliable.
- It extends Kubernetes using CRDs.
- It is a hybrid, cloud, enterprise Kubernetes application platform.

 **Expand**

 **Correct**

Correct! The concise definition of OpenShift, as provided on the Red Hat website, says that OpenShift is a hybrid cloud, enterprise Kubernetes application platform.

44. Which statement best describes blocking invocations?

1 / 1 point

- After the invocation they wait for the result.
- They wait for a result prior to invocation.
- The result is invoked prior to the action.
- They invoke the action immediately but do not wait for the result.

 **Expand**

 **Correct**

Correct! Blocking invocations invoke the action and wait for the result.

45. Which technology is generally considered an example of serverless computing?

1 / 1 point

- SaaS
- IaaS
- FaaS
- PaaS

 **Expand**

 **Correct**

Correct! FaaS is an excellent example of serverless computing.