Vladyslav Shumanskyy Vladyslav Shumanskyy

Started on	Tuesday, 16 June 2020, 12:01 PM
State	Finished
Completed on	Tuesday, 16 June 2020, 12:23 PM
Time taken	22 mins 29 secs
Grade	**10.7** out of 12.0 (**89**%)

Question **1**
Correct
Mark 1.0 out of 1.0

A session guarantee is a [data consistency model] ✓ that ensures to [a specific user] ✓ that as long as [a session hasn't ended] ✓ a certain property will be stable. That property is [the consistency of read and write operations] ✓ .

A sua resposta está correta.

The correct answer is:
A session guarantee is a [data consistency model] that ensures to [a specific user] that as long as [a session hasn't ended] a certain property will be stable. That property is [the consistency of read and write operations].

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:02	Saved: {data consistency model} {a specific user} {a session hasnt ended} {the consistency of read and write operations}	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **2**
Correct
Mark 1.0 out of 1.0

A computation (running an algorithm, calling a code module, etc.) is a good candidate to be offloaded from a mobile device to a surrogate machine if:

Select one:

○ the mobile device CPU is slower that the surrogate machine CPU and the input data is on the mobile device.

○ **I do not want to answer (no penalty).**

○ the latency on the network between mobile device and surrogate is bigger than the throughput.

○ the required code is on the chosen surrogate computer and the input data is small.

○ both the required data and code are smaller than the surrogate machine memory.

● the time to transmit code, input and output data to the surrogate machine plus the estimated computation time on the surrogate machine is smaller than the estimated local computation time. ✓

A sua resposta está correta.

The correct answer is: the time to transmit code, input and output data to the surrogate machine plus the estimated computation time on the surrogate machine is smaller than the estimated local computation time.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:04	Saved: the time to transmit code, input and output data to the surrogate machine plus the estimated computation time on the surrogate machine is smaller than the estimated local computation time.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **3**

Correct

Mark 1.0 out of 1.0

In the context of computational offloading, regarding the network latency and throughput between mobile device and candidate surrogate computers, pick the most correct of the following options:

Select one:

- ○ Only latency must be updated through periodic measurements (active measurement).
- ○ **I do not want to answer (no penalty)**
- ● If a mobile device and a candidate surrogate have never exchanged data, throughput and latency cannot be estimated from passive measurements. ✓
- ○ Current throughput can be determined from previous data transmissions (passive measurements). Latency is constant.
- ○ It is important to measure the throughput regularly but the latency is irrelevant.

A sua resposta está correta.

The correct answer is: If a mobile device and a candidate surrogate have never exchanged data, throughput and latency cannot be estimated from passive measurements.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:05	Saved: If a mobile device and a candidate surrogate have never exchanged data, throughput and latency cannot be estimated from passive measurements.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **4**

Correct

Mark 1.0 out of 1.0

When designing an indoor location system for user privacy, is it better to have the emitters:

Select one:

○ On the user devices.

○ It doesn’t matter. Emitter location is irrelevant for privacy.

● On the infra-structure hardware (antennas on walls, ceilings, etc.) ✓

○ **I do not want to answer (no penalty)**

A sua resposta está correta.

The correct answer is: On the infra-structure hardware (antennas on walls, ceilings, etc.)

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:05	Saved: On the infra-structure hardware (antennas on walls, ceilings, etc.)	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **5**

Correct

Mark 1.0 out of 1.0

The main disadvantages of signal strength fingerprinting as a location mechanism are:

Select one:

○ **I do not want to answer (no penalty)**

○ **E.** Both B and C

● **F.** Both A and D ✓

○ **C.** Fingerprinting requires personal biometric information that should never be public.

○ **B.** The devices used to perform the mapping phase are specialized and expensive.

○ **A.** The fingerprints change too easily when access points are added/removed/moved.

○ **D.** It’s cumbersome and expensive to scale the system to large spaces.

A sua resposta está correta.

The correct answer is: **F.** Both A and D

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:06	Saved: F. Both A and D	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **6**
Correct
Mark 1.0 out of 1.0

In a system with session guarantees, so that the users may move to another server, the system must provide a consistency model between servers that ensures:

Select one:

- ○ **I do not want to answer (no penalty)**
- ○ any consistency as long as servers exchange updates
- ○ any consistency that is causal
- ● eventual consistency ✓
- ○ strong consistency

A sua resposta está correta.

The correct answer is: eventual consistency

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:07	Saved: eventual consistency	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **7**
Correct
Mark 1.0 out of 1.0

In a system supporting session guarantees, read operations are described as a set of relevant writes. Relevant writes for a specific read operation **R** returning a data item **DI** are:

Select one:

- ○ All the writes previously performed on DI.
- ○ The write operations that don't corrupt this read operation.
- ● The write operations that had to be performed in order for R to return the value it returned. ✓
- ○ **I do not want to answer (no penalty)**

A sua resposta está correta.

The correct answer is: The write operations that had to be performed in order for R to return the value it returned.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:07	Saved: The write operations that had to be performed in order for R to return the value it returned.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **8**

Incorrect

Mark -0.3 out of 1.0

How are the desired contents of the phone local cache in Wherestore determined?

Select one:

○ Using a set of ranks and a place transition graph.

● Using a set of ranks resulting from multiplying item priorities and filter probabilities. ✗

○ Using a set of filters adapted to the phone's location.

○ **I do not wish to answer (no penalty).**

○ Using location prediction and a place transition graph.

A sua resposta está incorreta.

The correct answer is: Using a set of ranks and a place transition graph.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:15	Saved: Using a set of ranks resulting from multiplying item priorities and filter probabilities.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Incorrect**	**-0.3**

Question **9**

Correct

Mark 1.0 out of 1.0

Power modelling is a technique (e.g. as in the powerscope system) for:

Select one:

● a. estimating the power consumption of a device by creating a profile of the energy cost of low level operations through measurement in lab conditions. ✓

○ b. estimating the power consumption of a low level device operation through measurement in lab conditions of the energy cost of low level operations.

○ c. Modelling the poewr usage habits of users and creating a profile of how they use applications.

○ d. **I do not wish to answer (no penalty)**

○ e. estimating the power consumption of a device by recording a history of the average energy cost of high level applications.

A sua resposta está correta.

The correct answer is: estimating the power consumption of a device by creating a profile of the energy cost of low level operations through measurement in lab conditions.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:20	Saved: estimating the power consumption of a device by creating a profile of the energy cost of low level operations through measurement in lab conditions.	Answer saved	

3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **10**
Correct
Mark 1.0 out of 1.0

Marker base tracking of the scene in augmented reality is:

Select one:

○ a. based on special easily recognizable purpose images in the scene, better suited for indoor spaces and more computationally intensive than feature-based tracking

○ b. based on special easily recognizable purpose images in the scene, better suited for large spaces and less computationally intensive than feature-based tracking

● c. based on special easily recognizable purpose images in the scene, suited for indoor spaces and less computationally intensive than feature-based tracking ✓

○ d. **I do not wish to answer (no penalty)**

○ e. based on easily recognizable objects in the scene, suited for outdoor spaces and less computationally intensive than feature-based tracking

A sua resposta está correta.

The correct answer is: based on special easily recognizable purpose images in the scene, suited for indoor spaces and less computationally intensive than feature-based tracking

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:20	Saved: based on special easily recognizable purpose images in the scene, suited for indoor spaces and less computationally intensive than feature-based tracking	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **11**
Correct
Mark 1.0 out of 1.0

The base VM in the cloudlets VM synthesis approach is:

Select one:

○ a. a working process VM that includes the OS and applications and is waiting to receive the data from the mobile device.

○ b. a hibernated hardware VM container with applications and data and not requiring an OS.

○ c. a working hardware VM that includes the operating system and applications that will run the relevant application as soon as the user requests it.

● d. a working hardware VM that includes the operating system and will run the relevant application once scripts are run that install the application and copy relevant memory from the mobile device. ✓

○ e. **I do not wish to answer (no penalty)**

A sua resposta está correta.

The correct answer is: a working hardware VM that includes the operating system and will run the relevant application once scripts are run that install the application and copy relevant memory from the mobile device.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:21	Saved: a working hardware VM that includes the operating system and will run the relevant application once scripts are run that install the application and copy relevant memory from the mobile device.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

Question **12**

Correct

Mark 1.0 out of 1.0

Spacial K-anonimity is:

Select one:

- ○ a. the privacy guarantee provided by a k-tier spacial transformation for at least k users of a location based service.
- ○ b. **I do not wish to answer (no penalty)**
- ○ c. the guarantee provided by a spatial anonymization system will ensure that, for each one of the real queries, k-1 dummy queries will be submitted to any location base service.
- ● d. the guarantee that a spatial anonymization system will ensure that user locations submitted to a location based service will be confused with the location at least k-1 other users. ✓
- ○ e. the guarantee that a spatial anonymization system will ensure that k user queries submitted to a location based service will be confused with at least k-1 other queries.

A sua resposta está correta.

The correct answer is: the guarantee that a spatial anonymization system will ensure that user locations submitted to a location based service will be confused with the location at least k-1 other users.

Response history

Step	Time	Action	State	Marks
1	16/06/20, 12:01	Started	Not yet answered	
2	16/06/20, 12:23	Saved: the guarantee that a spatial anonymization system will ensure that user locations submitted to a location based service will be confused with the location at least k-1 other users.	Answer saved	
3	**16/06/20, 12:23**	**Attempt finished**	**Correct**	**1.0**

◀ First Exam - Part I

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