Interviews Questions

Palestinian companies

One Hand can't clap

Table of Contents

Foothill

Interview 1……front-end:

Vue JS (front-end)

Java Script

1) How can we use a map to reduce or filter, and some questions about that?
2) What is the difference between == vs ===?
3) What is the closure?
4) Why do we need to use callback?
5) What is the difference between callback and promise and async/await?
6) What is callback hell?
7) If we use an array of objects and apply to them a map method, does it mutate the array or not (it affects the original array or not)?
8) Difference between axios and fetch?
9) What is a spa?
10) Difference between spa and SSR?
11) Difference between let and var?

CSS

1) What is float and an example of it?
2) Explain the display?
3) What is the difference between inline, block, and inline-block?
4) Explain the box model?
5) Property of box-sizing?
6) Property of position and give examples.
7) What is semantic HTML and why do we need them?
8) Example of CSS unit? And why do we use rem?
9) Difference between display: none and visibility: hidden?

Interview 2……front-end train:

CSS

1) What is the difference between div and span?
2) Explain position in CSS with examples?

3) If you have a div with 100px of width if I give it padding of 20px what is the new width?

4) Explain flex and how to use it?

5) Explain JavaScript promises?

6) Explain JS event loop, call stack, HTTP method?

7) Explain Fetch?

8) What is the difference between == and ===?

9) Explain map, filter and reduce and use them in reaching data?

Original script:

مسا الخير انا قابلت كفورنت اند تدريب كمان لسا مش وظيفه

سالوني عن كثير شغلات بلشت من شو الفرق بين الديف والسبان اشرح البوزيشن بال css كل البوزيشن مع اعطاء مثال كمان على كل وحده كمان عند ديف عرضها 100 بكسل اذا حطيت بادينغ 20 بكسل كم بصير عرضها وكيف دخليها 100 بيكسل بس حتى لو مع بادينغ

اشرح الفليكس وكيف بقدر استخدمو

الجافا سكريت البروميس , ايفنت لوب , كول ستاك ,كول باك , http methd,اشرح الفيتش, شو الفرق بين دبل==, ==, ===,

اشرح الماب ,الفلتر ,الريديوس,(حطلي اريه اوف اوبجكتس استخدم ال 3 فنكشن الي قبل فيها عشان اطول داتا معينه) , بخليك تعدي الكود بطريقه اخرى عادي يعني عدت الكود 3 مرات كل مرة بسنتكس مختلف , سؤالين oop سؤالين بروبليم واحد حلو سهل على مجموع الارقام من 1 ل n

والتاني انو اذا اعطاك سترغ اصلي وسترنع معمولو روتيت بمقدار معين بدك تعرف انو الي معمولو روتيت هو نفسو الاصلي

سؤال حلو 2 لنكد ليست متصلات اوجد نقطه الاتصال ودايما في اتصال بينهم حليتو عالهاش ماب قلي طريقه تانيه ف حليتو ع الطول تاع كل لنكد ليست

فوتهيل

Interview 3……android developer:

Original script:

فوتهيل، قدملتها ع اندرويد وكانت المقابلة بس جافا واوبجيكت اوريانتيد وفاتو فيهم شوي بزيادة عن اكزلت وسألوني عن ال SOLID وازا بعرف اشي عن الاركتيكشر باتيرن وشو شغلات اشتغلت عليها من قبل وسألوني شوي بالداتا بيسيز

Interview 4 ...front-end:

1- Tell me about yourself and experience

2- Why did you choose Foothill?

 3- Why did you choose Front-End not another career path?

4- Tell me a problem you faced in a project and how did you fix it?

5- Data Structures:

- What are the Data structures that you know?
- What is the difference between Array and LinkedList
- What is the search complexity of Array? (Binary search => O(logn))
- How do we get the value from an Array of integers? by Index ----> (Explain how does it get the element at required index): hint (size of integer is 4 bytes and array are continuously allocated in memory)
- Can we make a Queue using stack? if so (how many and explain the enqueue and dequeue operations are performed using the stacks)
- Do you know HashTable? how is it structured in the memory? How do we get the data? hashFunction?
- Tell me about the garbage collector?
- Binary tree explain how we decide what value is stored in left or right node
- Explain Recursion +++ write Fibonacci code using recursion +++ what data structure is used to do recursion (Explain)
- in the web browser we can go back to previous page or we can go to next page using browser arrows, what data structure do you think is used to do this

6- OOP:

- What is OOP and what is it used for?
- What is Data Abstraction and why is it important?
- What is Polymorphism (Explain)
- How do we use a method without creating an instance? (Declare it static)
- why do we use Setters and not adjust the attributes directly (i.e. why we use obj.setAttr(int attr) and not obj.attr = 5), give me two reasons;

7- JavaScript:

- What is the difference between let and var (++ output)
- Do you know Promises? (Explain)
- Do you know Array methods (find, filter, reduce)? (Explain each one of them and their output) ++ find sum of array using reduce

- What is the difference between == and === ? (Which one takes more time)
- how do we convert a variable to Boolean value? using Boolean(variable_name);
- What is the term that describes the changing of a type in an operation implicitly ? i.e. : '1' + 1 ---> type coercion

8- CSS:

- We have a div with a width of 400px and border of 3px and and padding of 40px from all sides, what is the element's width ? (400+40+40+3+3)px;
- How do we keep the div's width 400px? ans: use box-sizing: border-box;
- Explain Flexbox? How does it work?
- center a div using Flexbox (there is just one div and you want to give the body display flex and height 100vh)
- What is justify-content ? Does it always work horizontally? When does it work vertically ?

9- GitHub :

- Have you worked with a team on a project? What did you use to keep track of changes ?
- Did you use git ?
- Have you used the command line ?
- What are the commands that you know or used in git bash ?
- What happens when we use git add . ? are the changes applied on everyones copy ? (Explain what happens when we add a file after changing)
- What is the staging area ?

Exalt

Interview 1……summer trainee position:

Position: university summer trainee

Data structure

1) How to define a pointer, its space in memory, and how to print the address and value?

2) Linked list: how to add, remove, edit, and differentiate between linked list and array what is better and when to use each. PS: the interviewer asks the student to write a code or pseudo code
3) How binary search works, write a pseudo code
4) Differentiate between stack and queue, write a code for one of them

OOP

5) What are the four principles of object-oriented programming and explain them?
6) The difference between interface and abstract?
7) Write a polymorphism code?
8) What is the composition relationship?
9) What is a static method, class, and attributes? What do they differ from each other and what do they do?
10) Can the static method call a non-static attribute and why?

Interview 2:
Position: unknown

1) Talk about yourself?
2) Write a polymorphism class?
3) What is static exactly?
4) You are given a group of instances of a class and you need to conclude the output, and if the parent is an interface what would happen, what if the parent was an abstract class?
5) Difference between interface and abstract?
6) Difference between static and constant?
7) You have a string s=new string ("{{{}}}{{") how to know that each open bracket is closed correctly?
8) If you have an unordered array, write a code that will give me the highest value and the one that came after it as an example int[] arr = {10,2,40,20,60,100,90} you will return 100 and 90

Interview 3:

اكزلت قابلت فيها 3 مقابلات، الأولى كانت جافا واوبجيكت اوريانتيد وسؤال تعمله الباينري سيرش تاني مقابلة برضو اوبجيكت اوريانتيد واكمن سؤال بسيطات بروبليم سولفينج وخلاني أشرحله السينجلتون بشكل نظري وكيف ممكن اعمله.التالتة مع ال CEO وكانت تعارف وتحكي عن نفسك اكتر من انها مقابلة وحكالي برضو اكتبله سودوكود لكلاس سينجلتون

Interview 4:
object oriented drive

Interview 5 … design verification… train to hire:

Position: design verification

Most of the questions were about data structure, digital design and Verilog.

1. draw 4to1 mux using 2 to 1 muxes.
2. question about fsm.
3. write code -> 1 find the middle node in a linked list through binary search one iteration.
4. write code -> find the missing number in an array that contains numbers from 1 to 9 without repetition and its size is 8.
5. write code -> how to make swap in c without using temp variables.
6. explain verilog code and make a swap in it.
7. Concept questions of verilog and the difference between blocking and nonblocking assignments.

    interview duration : 1hour.

Interview 5:

Position: unkown

Oop:

1. Difference between interface and abstracted.
2. What is the meaning of polymorphism with an example?
3. What is the meaning of the final class and final method?
4. Differences between == and equals.
5. How does "compare to" work?
6. how to make an override for equals?

Data structure:

1. differences between array and linked list
2. How to remove an element from a linked list when it sends to you a specific element number?
3. code recursion for "power" and how did it work?
4. write code -> nodes number in the binary search tree
5. write code -> height binary search tree.
6. differences of bre-order, in-order and postorder in tree printing.
7. how to reverse an array without using another one.

Harri

Interview 1……android developer:

<div dir="rtl">

هاري، برضو قدمت عندهم أندرويد

كانت أصعب مقابلة لأنهم غاصوا كتير بالكور تبع الجافا يعني أسئلتهم كانت بتعرف ازا انت فاهم الجافا صح وكيف كلشي فيها بشتغل وحطولي كود فيه مشاكل وطلبوا مني أعمل اضافات عليه لتخليه صح وكل خطوة بسألك ليش عملت هيك مش اشي تاني

وأسئلة البروبليم سولفينج تبعتهم كانت بسيطة كتير في سؤال واحد ما عرفت أجاوبه لأني ما فهمته صح، انه ازا عندك كلاس A B C كيف بدك تخلي A يورث B و C

هو انك تخلي A extend b extend c

</div>

Interview 2 …Back-end

- ✅ Tell us about yourself in 60 seconds.
- ✅ What was your software graduation project?
- ✅ What are the programming languages you are familiar with?
- ✅ What are the main differences between a scripting language (like javascript) and a compiled language (like Java)?
- ✅ What is library? Illustrate your answer with an example? What is framework? Illustrate your answer with an example?
- ✅ What is a Hash map? How is it presented? Give an example where we can use it
- ✅ What is the main differences between abstract class, concrete class, interface and object?
- ✅ What is Agile methodology? How is it being used?
- ✅ Define factory design pattern? Give an example for it.
- ✅ How do we represent a many to many relationship in a relational database? Justify your answer?
- ✅ We work 9 hours a day (8 working hours + 1 break hour), if you were given the freedom to start your day as you like, when will you start your day and when will you finish?
- ✅ What's the output of this unix command "more *.json | wc -l"
- ⚙️ Please answer the following Riddle https://www.dropbox.com/s/ql0i93br97txtpj/Riddle.mp4?dl=0

Interview 3… front-end:

Position: front-end

1) what is the difference between linked-list and array
2) Questions about algorithm
   a. What is the meaning of big O notation.
   b. What is the best way to traverse a tree?
   c. What is the best way to rearrange an array?
   d. use bubble sort for rearrange an array.
   e. What is the depth first search and breadth first search?
3) Tell me everything you know about using js with arrays.
4) you have a tree and you want to represent it with a json object to be a child for this parent.
5) how to put img in a web page.
6) how to use a fixed image size 100*100?
7) What did you know about "position"?
8) what is the difference between span and div
9) What is the difference between "display" and visibility.and how did you make an animation?

10) What is the z-index?

11) What is the arrow function and for what it is used?

12) What is the difference between state and props?

13) What is the meaning of redux?

14) If something isn't made with redux, what can do to give the same result?

15) How to make connections for redux in react?

16) explain MVC model and how to make more than action in 1 dispatch.

17) How do we write expressions?

18) how we rout in angular (ui-route)

مثلا كل اشي css html js عال w3school لازم تكوني شايفتيه و دارستيه،ال singleton اذا نسيت اكتبه بسألو عنه دائما مع انه معظم الخريجين ما بكونو مطلعين عليه مليح، و الداتا ستركشر نفس الاشي basics ومرات بطلبو كود مثل أسئلة geeks for geeks.

Bootstrap advantages and how does the grid system work.
What is Jsx
why React
es6 vs es5
Private vs public vs protected
Singleton
Sorting o(n)
Let blockes , var function , const
Promises
Map foreach reduce
Write Fibonacci script with es6
Write a Json object example, object of objects.
Ajax, why do we use it, advantages.
'For' types
Dom vs react dom, explain by drawing an example.
Pass by value vs by reference
The Spread operation
Immediately invoked functions syntax example.
Map vs object
Css Selectors like ~ > +
Dom example vs react dom
Life cycle methods explain some of them.
Local storage vs sessions vs cookies
Why arrow function
State vs prop
Default prop
Rendering, reactDom. how, explain

Interview 4.....back-end:
Position: back-end

1) Given an array of arbitrary numbers , we need O(n) algorithm that return two numbers , their sum equal to a given number

2) Given number and array of unordered numbers return a subarray it's sum equal to given number
3) Difference between interface and class and abstract class 4- Polymorphism, inheritance
4) Interpreted language vs compiled language with example 6- Can you solve the bridge riddle? – Alex Gendler
5) Other oop question
6) What is cookie ,session
7) Database question: have student and teacher what is the type of relation between , a. After find relation
   ● Give me number of all student teach by given teacher
   ● Another question on join
   ● Another question on aggregation , having

Interview 5……. QA:

Position: QA

في البداية عرفي عن حالك وعن مشروعك التخرج وبالعربي حكيت شو التكنولوجي اللي استخدمتيها بمشروعك التخرج كيف اخدتي الداتا بين الفرونت والباك يعني قصدهم اشرحي عن ميثود get,post سألني اشتغلتي على ميثود الـpot حكيتله لا بعدين داتا بيس اعطاني ٣جدوال وسألني عنهن البرايمري والفورن وكم كويري بسيطات عليهن بعدين عرضلي باينري تري سألني سؤال لو اعطاني ٢ نود رجعلي اول اب الهم مش كود المهم تحكي أفكار حل بعدين عرضلي كود حكالي اتبعه شو بعمل يعني شو الناتج كان الكود انه يحذف

المتكرر من الاربي وسألني سؤال لو عندي قابل فيه ألف كلمة بدي اعرف كم متكررة شو الطرق حكيت هاش سيت وسؤالين بزل واحد سؤال الضفدع والتاني سؤال العشر صناديق واه الاوبجكت اورينتد سال عن الوراثة والاوفر لود والافوررايد الفرق بينهم ومين بيصير بالكومبايل تايم ومين بالرن.

عرف عن نفسك انجلش

احكي عن مشروعك التخرج عربي عادي

وشو وظيفتك بالمشروع كانت

١ تعاملتي مع الداتا بيس؟

٢ شو الفرق بين nosql—sql

٣ بعطيك تلات جداول (طالب،كورس،جدول الي بكون فيه الid للطالب وid للكورس والعلامة)

4بتحكيلك شو نوع العلاقة ماني تو ماني

5كمان سؤالين sql بسيطات واحد عالجويت واحد.ع count

٦شو يعني linkedlist

٧شو بخزن فيها ...لي بنستخدمها بدل الarraylist

٨بعدها بتحكيلي عندي arr فيها اعداد بدي ابحث عن العدد index

شو الطرق ...لينير وباينري سيرتش ... اكتب الباينري سيرتش (ما بتتطلع عالكود بتحكيلك اشرحلي الطريقة) السؤال الاهم

اعطتني فورم تسجيل دخول شو الحالات الي بطلع خطا وشو الصح

شو الاولويه اني اعملو تست

المفروض الجواب واحد اني يتعامل مع خطا

تاني انو بتتعامل مع البيانات المدخله صح

اعطتني فورم تسجيل دخول شو الحالات الي بطلع خطا
وشو الصح
شو الاولويه اني اعملو تست
المفروض الجواب واحد اني يتعامل مع خطا
تاني انو بتعامل مع البيانات المدخله صح
مشان يشوف شو وضع السيرفر والكونكشين معdb

وبعدها تحتو في جدول شو في اخطاء
متلا مكتوب فوق شو الفيلد الي لازم تنعرض وكان في
واحد زياده
والبحث ١١٤ كيف المفروض يظهرو النتائج
متلا مكتوب صح (جنب ما يعرض السالاري الفاضيه
والجدول كانت معروضه) وهيكا اخطاء

بعدها شو بتعرف عن oop
هل اشتغلتي قبل
حكتلهم اه وفرجيتهم مشروع صارو بسالوني عملتي
كلاس ابستراكت
عملتي اوفر رايد
شو استخدمتي ولي استخدماتي اشياء بالمشروعي

AXos

Interview 1:

xngage

Interview 1..... front-end:
Position: front-end

Html

بسالو مثلا عن ال 5html شو ضافت اشياء جديدة وشو ال Semantic Elements وشو اشياء بتفيد لل SEO ومثلا كيف بقدر احسن ال optimization للبيج ممكن يسالو عن مكان ال script انه يكون بالهيدر فوق ولا مثلا بآخر ال body بالعادة بتكون اسئلة خفيفة ال html الفرق بين span, div,

css

ال box model ايش هو وانه الويدث بكون مثلا محسوب معاه ال padding and border ولا لا بسالو ممكن عن ال position, flex box هدول مهمات بالستايل بعدها بنتقلو لل JS بعطو مسائل بالعادة بدها حل ممكن يكون حلها recursion, closure ممكن يسالو عن console.log بعطوه بمثال مثلا يكون في timeout وجواته يطبع اشي متل هيك انا لما جيت رياكت ما كانو يشتغلو فسالوني سؤال واحد وحكيت كلشي بعرفه وما سالوني غيره واعطوني حزيرة يومه اله علاقة بالساعة كانت اولها بتكون اسهل وشوي شوي برفعو المستوى

Asal

Interview 1......... front-end:
Position: front-end

these question for a fresh front-end developer

```
console.log(4 ==="4")

 console.log(4 == "4")

console.log(4 === +"4")

console.log(+"4")

 ----------------

setTimeout(() => console.log('1'), 0)

setTimeout(() => console.log('2'), 20)

setTimeout(() => console.log('3'), 10)

console.log('4')

------------

for(var x=0; x<5; x++){

 setTimeout(() => console.log(x), 4000)

}
```

promises in javascript

```
HelloWorld.js                                    3x7z9pcxz ✏

1 ▾   function countWords(str) {
2         str = str.replace(/(^\s*)|(\s*$)/gi,"").replace(/[ ]{2,}/gi," ");
3
4 ▾       return str.split(' ').filter(word=>{
5            !checkWord(word)
6         }).length;
7       }
8 ▾     function checkWord(wor){
9           var format = /[!@#$%^&*()_+\-=\[\]{};':"\\|,.<>\/?]+/;
10
11 ▾      if(format.test(wor)){
12           return true;
13 ▾      } else {
14           return false;
15         }
16       }
17       console.log(countWords("ahmad is man"));
```

ITG

-> <u>follow up the link</u>

Unknown companies' interviews

Interview 1…

Position: Unknown…. Seems to be training

1) (After Creating a Linked List) You have a linked list, it is all connected in one direction, we want to connect it in the other direction to create a doubly linked list

    do it

    beware that it is a doubly linked list not cyclic

2) you have a class called Friend and inside it there is a list of Friends, print out all the names of friends of a certain person (including his name) assuming there are no cycles (Ii.e., i am friends with john and john is friends with me).

3) when you compare 2 objects in (Java or Cpp) and you use == it will give you that they are not the same object. What if i want them to give me that they are the same object if they had the same name

    (Assume we have this class

    class Friend{

    const char* name;

    Friend[] friends;

    }

)

use compareTo, or you can use operator override or smthing like that in cpp by saying operator==(friendA & friendB) not sure how exactly

4) what is the difference between * and & (pointer and reference)

pointer " can point to null, but reference '&' must point to a created object in memory or to a place in memory. you can say int a; and end, but you can't say int & a;, you must say it as int &a = 5;

5) you have this array: [1,2,5,4,22,4,3,1,2,5,0,23,1,2,5,3] show how many times each number is repeated (i.e. i want to know how many times 1 is repeated and how many times 22 is repeated, know that 22 doesn't mean that 2 is repeated 2 times, it is a different integer).

Interview 2...... Hardware Verification

Hardware Questions:

1) Difference between Blocking and Non-Blocking.
2) Create a Finite State Machine to detect a pattern in a Serial Input.
3) Difference between "==" and "<=" in Verilog

Software Questions:

1) what is a singleton (questions about singleton in general)
2) polymorphism
3) Static vs non-Static
4) Count number of elements in a Linked List 5-Fill a
5) Dimensional (4x4) Array Diagonally (such as below (even though it is 3x3)):

```
 _

| *       |

|    *    |

|      * |

------------
```

Interview 3……. Hardware Verification

1) What is polymorphism
2) If i had a parent class called shape, how would it be implemented (يعني انه abstract methods) how will its children be implemented and what defines one child over the other?
3) If I had an array of different shapes (squares/circles…etc) and I was to read them, how would I read them?
4) Swap 2 integers (2 methods of swapping one without temp and one with temp the one without temp has an issue that is: if we added 2 integers, they might be above int limit and might cause overflow)
5) we have an array of size 9 and it contains integers from 1-10, find the missing integer. (Hint: we know what numbers there might be and only one number is missing)
6) create a linked list and make a queue from a linked list with constant insertion and popping time. (Hint: think about having more than one pointer)
7) create a 4x1 MUX from 2x1 MUXes
8) Create a state space diagram to find a pattern from a serial input.
   E.g.: input: 110110101010010101 we want to find the pattern:11010

Interview 4...........Train position

4) static variable and static method what's the mean of each

5) implementation of singleton class.

6) Thread in java: هون كان الفكرة انو بسس تيجي تعمل ثريد لازم تعمل ميوتكس لانو بدونهم بصير كثير مشاكل

7) write factorial code in recursion

8) write Fibonacci code in recursion

9) write code for the greatest common devisor and smallest common devisor in two ways recursion and loops

10) implementation for equal method (override), compareTo method and clone method.

Interview 5....... unknown position seems to be train

1) Access modifiers in java

2) what is OOP main features

3) what is polymorphism

4) abstract and interface concept

5) encapsulation concept

6) singleton class design patterns write code

7) does java adopt multiple inheritance and why?

8) give max and second max from array in single loop

9) there is linear and nonlinear data structure give me example?

10) list the types of linked list?

11) from circular linked list give the middle using two ways.

12) write code return Hight from binary tree.

13) there is an array and value and I want to search on the array and return if this value exists or not.

14) there is a sort array and value and I want to search on the array and return if this value exists or not.

15) write a query that counts the number of the person in each country.

Intreview5……….. Unknown position

1) How to find the longest path for a tree
2) swap x, and y without temp
3) make a queue from a stack
4) make a stack from a queue
5) get the second largest number from an array
6) tell me about singleton
7) what is the difference between abstract and interface
8) explain private, public, and protect
9) implement Fibonacci, factorial code

intreview6………Unknown position

1) what is object-oriented programming, and why do we need it?
2) what is polymorphism, write an example of it.
3) difference between abstract class and interface?
4) what is a singleton design pattern? هاد اقرا عنه وشوف كيف تعمل الكلاس تبعك سينغلتون
5) what is equals method in java, write a code that override the equals method
6) what is the compareTo method how to use it?
7) how to swap two integers without using another int?
8) how to find the middle of the linked list?
9) how to find the length of the linked list?
10) for (int i =0 ; i<0 ; i++) {

   ..

   تعرف كيف الاوردر للوب بتتنفذ   }

11) Tree: print the elements of the tree
12) You have an array of string s "lal , "all , "dsr , "rsd , "sss , "drs", count how many time each word is repeated, lal and all is equal as equal words are the word have same count for each letter

   Original script for 12:

Intreview7………Unknown position

1) tree: return max value tree, write code
2) x, y: swap without temp
3) what is cycled linked list, write a code to confirm linked list cycled or not
4) what is polymorphism?
5) what is the difference between abstract class and interface
6) reverse the linked list.