

EPAM Interview Questions:

Khumoyun Inoyatov: Middle (3 may)

JavaScript:

- JavaScript qanday ma'lumot turlari (data type) mavjud?
- null va undefined ham ma'lumot turlariga kiradimi?
- var, let va const orqali o'zgaruvchi e'lon qilishni farqi nimada?
- hoisting haqida ma'lumot bering
- hoistingda temporary dead zone tushunchasi nima?
- Set, Map, WeakSet va WeakMap haqida ma'lumot bering
- o'qli funksiya (arrow function) va oddiy functionni farqi nimada?
- JavaScriptda context deb nimaga aytiladi?
- this kalit so'zi va uni ishlatilishi haqida ma'lumot bering
- __proto__ va prototype ni haqida ma'lumot bering va farqini ayting
- call, bind, apply metodlarini farqi nimada?
- JavaScriptda Window global obyektida qanday xususiyatlar mavjud?
- Sahifa addressini olish uchun Window global obyektini qaysi xususiyatidan foydalaniladi?
- JavaScriptda DOM dagi elementlarni olish uchun qanday metodlar mavjud?
- getElementById va getElementsByClassName ni farqi nimada?

React:

- Reactda qanday komponent turlari mavjud?
- Class komponentlar bilan qanday ishlanadi?
- Class komponentlarda qanday hayot sikli metodlarini bilasiz?
- Hayot sikli metodlari funksional komponentlarda qanday ishlatiladi?
- Reactda Virtual DOM haqida ma'lumot bering
- state va props ni farqi nimada?
- Funksional komponent va class komponentlarda state yozilishi farqi nimada?
- Reactda Context tushunchasi nima?
- Reactda formalar bilan qanday ishlagansiz?
- controlled va uncontrolled componentlar haqida ma'lumot bering?
- useRef dan qanday foydalaniladi?

Amaliy savollar:

- JavaScriptda array ichidagi sonlarni qo'shish funksiyasini yozib bering
- JavaScriptda ikkita obyektini solishtirish funksiyasini yozib bering
- JavaScriptda ichma ich joylashgan obyektlarni solishtirib berish funksiyasini yozib bering
- Arrays in array strukturasidagi ma'lumotni array of object strukturasiga o'tkazuvchi funksiya yozib bering
e.g. "Khumoyun", "Inoyatov", ... "Maqsud", "Karimov" => {firstname: "Khumoyun", lastName: "Inoyatov"}, ... {firstname: "Maqsud", lastName: "Karimov"},
- obyekt ichidagi metodni turini oddiy funksiyadan o'qli funksiyaga o'zgartirganda this o'zgaradimi yo'qmi, ko'rsatib bering
- Reactda kinoportaldan ma'lumot olib uni domga chiqarib beruvchi komponent yozib bering (API ga yo'nalish berilgan)

Software Development Process:

- Code review nima, ishlagan joyingizda code review jarayoni bo'lganmi, o'zingiz code review qilganmisiz?
- Dasturlashda kod yozish amaliyotini yaxshilash uchun qanday prinsip (KISS, DRY, SOLID) va qurollar (tool)dan (ESLint, Prettier) foydalanasiz?
- Qanday vazifalarni boshqarish metodologiyalarni (task management methodologies) bilasiz (Agile, Scrum, Kanban)?
- Ishlagan joyingizda Scrum vazifalar boshqari tizimi qanday tuzilgandi?

Umar: Middle (3 june)

Basics

- Qanday CSS preprocessorlaridan foydalanganisiz?
- SASS va CSS ning bir-biridan qanday farqi bor?
- Loyihalaringizda CSS Grid va Flexboxlardan foydalanganmisiz?
- Responsive va Adaptive designlarning bir-biridan qanday farqi bor?
- position turlarini sanab bering

JavaScript

- JavaScript single-threaded dasturlash tilimi yoki multi-threaded dasturlash tilimi?
- Promise nima? Qanday promise metodlarini bilasiz?
- Tasavvur qiling 100 ta promise bor, qanday qilib shu 100 ta promiseni bir vaqtda consume qilish mumkun?
- Promise.all va Promise.race larning bir-biridan farqini aytib bering
- var, let va const ning bir biridan qanday farqi bor?
- Hoisting nima?
- JavaScriptda inheritance qanday ishlaydi?
- Objectning prototipini qanday aniqlash mumkun?
- JavaScriptda lexical environment nima? Lexical environment qachon yasaladi?
- Funksiyaning argumentlari ham lexical environmentga qo'shiladimi?
- JavaScriptda hodisalar qanday ishlaydi (event propagationga urg'u berilgan)
- Qanday qilib hodisalarning standart holatini, bubblingdan capturingga o'tkazib qo'yish mumkun?
- e.preventDefault() va e.stopPropagation() larning bir-biridan qanday farqi bor?
- Funksional dasturlash haqida nimalarni bilasiz? Funksional dasturlashning asoslarini sanab bering
- Pure functionlar haqida ma'lumot bering
- sessionStorage, localStorage va cookie larning bir biridan qanday farqi bor?
- Tokenlarni qayerda saqlagan yaxshi?
- Cookie ning qanday attributlari mavjud?
- Shallow copy va deep copy larning qanday farqi bor?

React

- Nima uchun Reactni import qilishimiz kerak?
- Qanday holatlarda callback funksiyalarni memoize qilish kerak?
- Reactda qanday Hooklarni bilasiz?
- React hodisalari bilan JavaScript hodisalari o'rtasidagi farqni aytib bering
- Qanday hayot sikli metodlarini bilasiz?
- Agar biron bir prop o'zgarsa, qaysi hayot sikli metodidan foydalanishimiz mumkun?
- React hooklari barcha hayot sikli metodlarini qamrab olganmi?
- Ta'savvur qiling, bizda ko'p ma'lumot mavjud, qanday qilib performanceni oshirishimiz mumkun?
- DOM va Virtual DOM ning bir biridan qanday farqi bor?
- React.forwardRef nima?

Qo'shimcha savollar

- Loyihalarda TypeScript ishlatib ko'rganmisiz? TypeScriptning qanday afzallik taraflari bor
- POST PUT va PATCH so'rovlarining bir biridan qanday farqi bor?
- Yaxshi kod deganda nimani tushunasiz?
- Qanday Code style Guidelarni bilasiz?
- Prettier, eslint haqida nimalarni bilasiz?
- CI/CD bo'yicha savollar

Amaliy savollar

- Raqamlar konsolga qanday ketma-ketlikda chiqadi?

```
setTimeout(() => console.log(1), 0);
```

```
Promise.resolve().then(() => console.log(3)).then(() => console.log(4));
```

```
console.log(5);
```

- Array ichidagi eng ko'p takrorlangan elementni topuvchi funksiya yozib bering

```
[1, 2, 3, 1, 3, 3, 5] => 3
```

- useStatega doir bitta amaliy savol

Software development process

- Kanban yoki Scrum metodologiyalaridan foydalanganmisiz?

- Code review bo'yicha tajribangiz bormi?

Nizomiddin: Middle (11 june)

JavaScript

```
<div class="container">  
  <div class="inner-block" ></div>  
</div>
```

1. inner-block divini qanday qilib centerga keltirish mumkin (flex, grid, margin, POSITION)
2. position: fixed; va position: relative; qanday ishni bajaradi?
3. responsive vs adaptive layout (css da qanday qilib responsive va adaptive design yaratsa boladi, Web Vitalsga doir savollar)
4. html (main, footer, header ...) teglari nima uchun kerak (Seo optimization haqida qisqacha savol)
5. Qanday code style guidlaridan foydalangansiz?
6. Eslint va Prettier haqida ma'lumot bering
7. CI / CD nima va qanday ishlaydi?
8. Git nima uchun kerak?
9. Unit, Integration, E2E testing haqida gapirib bering
10. Pure function nima?
11. Arrow function vs function
12. bind, call, apply (Loss of "this")
13. Yana js da tasklarni yechish vaqtida
14. Lexical environment
15. Shallow copy va deep, context, functional programming

JavaScript masalalar

1. console.log(add(1)(2)) // output: 3;
2. let obj = {
 method1: () {
 console.log(this)
 },
 method2: () => {
 console.log(this)
 },
 method3: () => {
 let func = () => console.log(this)
 func()
 },
 method4() {
 let func = () => console.log(this)
 func()
 }
}

```
obj.method1()  
obj.method2()  
obj.method3()  
obj.method4()
```

3. let sum = () => {/ ... /}

console.log(sum(/ any number of arguments /)) // sum of given arguments

(asked to solve this with reduce function)

REACT

1. React nima va qanday ishlaydi

2. Redux dataflow

(Redux nima va qanday vazifani bajaradi va useContext dan farqi nimada)

3. Qanday qilib reactda kop malumotlarni performanceni tushurmagan holda handle qilish mumkin

(React Tasks: Reactda har sekunda increment bo'luvchi counter ni yasab bering)

```
let TimerComponent = () => {
```

```
  return (
```

```
    <div>
```

```
      <button> Start / Pause </button>
```

```
      <span> { counter } </span>
```

```
    </div>
```

```
  )
```

```
}
```

Javohir Rajabboev (1 july)

HTML & CSS & JS bo'yicha savollar

0. CSS va SASS o'zgaruvchilari orasida nima farq bor?
1. Block va inline elementlari orasida nima farq bor?
2. HTML Semantic elementlari nima?
3. CSS da qanday nomlash metodologiyalarini bilasiz va ishlatasiz?
4. Accessibility nima?
5. SEO optimizatsiyasi nima?
6. JavaScriptda qanday ma'lumot tiplari mavjud?
7. Primitiv va Reference ma'lumot tiplari orasida nima farqlar mavjud?
8. Odatiy (qo'lbola - custom) Promise kutubxonalaridan foydalanganmisiz?
9. Fetch va Axios ni farqi nimada va qanday qulayliklari mavjud?

Amaliy savollar:

10. Outputlar (natijalar) ni ketma ketligida ayting

```
function f() {  
  console.log(x)  
  console.log(y)  
  var x = 0;  
  var y = 1;  
}
```

11. Natija nima bo'ladi?

```
function f() {  
  setTimeout(() => console.log(0), 0)  
  console.log(1)  
}
```

React bo'yicha savollar:

12. Reactdagi asosiy hayot tsikli metodlari qaysilar?
13. Pure component nima degani? va oddiy komponentdan nima farqi bor?
14. VirtualDOM nima degani va DOM dan nima farqi bor?
15. Quyidagi kodda qanday xatolik mavjud?

```
import { useEffect } from "react"  
import { subscribe, unsubscribe } from "subscription-lib"
```

```
function Component() {  
  useEffect (() => {  
    subscribe ()  
  })  
  return null;  
}
```

16. Redux ning side-effect (nojoyi ta'sir) kutubxonalaridan foydalanganmisiz?
17. Q/A team bilan ishlaganmisiz va ular bilan ish jarayoni qanday ketadi?

Jahongir

- CI & CD

- Promise

- async/await (funksiya yozib berishdi va async await bilan fake api yasab berishimni so'rashdi. try catch ham ichida)

- this/call/apply/bind (2) mana bundagi (https://t.me/khumoyun_codes/106) this topshirig'iga o'xshagan topshiriq

- Event loop , asinxronlik haqida gapirdim va topshiriq berishdi (1) (Pastda kod bor)

- Functional, OOP paradigms

- Differences => Map vs Object

- Testing (unit, integration, e2e) —> algoritmik masala berib (masala xabar oxirida) unga unit test yozishimni so'rashdi

- Prototypal inheritance; __proto__ vs Prototype (farqi)

- Hoisting

- Scope bo'yicha topshiriqlar

- Which db did you use

- Code quality, (DRY, SOLID kabi tamoyillar, linter (eslint), prettier haqlarida ham gapirdim)

- Yana esimga kelsa edit qilib qo'shib qoyaman :)

(1)

,

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

```
Promise.resolve().then(() => console.log(2)).then(() => {
```

```
  console.log(3)
```

```
  throw new Error
```

```
}).catch(() => console.log(4))
```

```
console.log(5)
```

,

Algoritm: isAnagram degan funksiya tuzish kerak oldidan ham orqasidan ham o'qiganda bir xil bo'lsa true bo'lmasa false qaytishi kerak

Javobim: function

```
function isAnagram (str) {
```

```
  return str.split('').reverse().join('') === str
```

```
}
```

.bind().bind() ==> closure bo'yicha savol bu. Aniq qanaqa edi savol esimda yoq

Akbarov

Javascript savollari:

1. Advantages of SCSS.
2. Flexbox.
3. Media queries and responsive design.
4. Threads.
5. Event loop.
6. Let, var, const.
7. Hoisting.
8. Scopes.
9. Context
10. Call, apply, bind.
11. Promises.
12. Async await.
13. Lexical environment.
14. Local storage.
15. Session storage.
16. Cookies.
17. For in, for of.
18. Scrum, kanban.
19. Code review.
20. How to debug js code.

React bo'yicha savollar:

1. Virtual DOM.
2. React hooks.
3. React Portal.
4. React context.
5. React memoizations.
6. React pure component.
7. React lifecycles.
8. React hooks coverage with lifecycles.
9. React.forwardRef.
10. Red Flags.

Unknown

JS task:

charFrequency degan funksiya yaratish:

```
function charFrequency (string){
```

```
//Code
```

```
}
```

bu funksiya belgilani necha marta takrolanganini qaytarishi kerak

Masalan: charFrequency ("test")=> {t:2, e:1, s:1}

JS savol:

- 1.Execution context nima?
- 2.Creation va Execution phase la haqida gapirib ber?
- 3.Post increment vs Pre increment (++i vs i++)
4. Promise.allSettled ni implement qilib ber?

Azizbek Jonibekov: junior (june)

Intervyu oddiy savollar bilan boshlandi. Qayerda ishlaganman qanaqa proektlar qilganman. Qaysi fraymvorkda ishlaganman. Keyin men hal qilgan eng qiyin muammo haqida soʻrashdi.

Keyin HTML CSS ga oʻtildi.

- Html semantik teglar nima uchun kerakligi
- Div span teglarini farqi
- Kontentni sahifani oʻrtasiga qanday qilib joylanadi
- Flexbox haqida
- Box model haqida soʻraldi.
- position relative, static, fixed, sticky ni farqi

Javascript boʻyicha:

- Hoisting nima
- let, const, var ni farqi
- this kalit soʻzi haqida
- bind, apply, call haqida qisqacha
- arrow function da this kalit soʻzining qiymati nima boʻladi
- Object.prototype va Prototype inheritance qanday ishlaydi
- proto bilan prototypeni farqi
- closure nima

Soʻng React va Vue ga oʻtildi.

- functional vs. class component
- React lifecycle hooks
- Higher order components
- qanaqa hooklarni bilishim haqida
- useEffect qanday ishlaydi
- optimizatsiya haqida soʻraldi. Masalan memo() haqida

- vue da key nima uchun kerak
- v-if bila v-for nimaga bitta elementda ishlatilmaydi
- vue scoped / named slots

Rolling Scope School Tasks:

Question examples:

- Data types in JS. Type coercion.
- What is hoisting?
- Let vs var. Const.
- Passing data by value and by reference. Examples.
- `{a: 10} == {a: 10}`. What will the code return?
- What is this?
- Apply, call, bind. What are they used for? What are the differences?
- Closure. Give an example.
- Array methods that loop over the elements.
- Object methods to iterate over the elements
- Map, Set, WeakMap, WeakSet
- Browser events. Browser default actions abortion.
- Event bubbling and event capturing.
- Event delegation. Example.
- Event loop. Explain how stack and two queues communicate with each other in the loop?
- Promises
- spread/rest
- Any other questions on CoreJS/DOM/Event Loop/Inheritance/etc.

Coding tasks:

- `Function.prototype.bind` implement polyfill
- `Object.create` implement polyfill
- `Array.flat` implement polyfill
- `'hello world'.repeating(3)` -> `'hello world hello world hello world'`. How to implement?
- `myFunc('!', 4, -10, 34, 0)` -> `'4!-10!34!0'`. How to implement?
- `five(plus(seven(minus(three()))))` -> 9. How to implement?
- `add(5)(9)(-4)(1)` -> 11. How to implement?
- `periodOutput(period)` method should output in the console once per every period how much time left from the function first call. Example: `periodOutput(100)` -> 100(after 100 ms), 200(after 100 ms), 300(after 100 ms), ...
- `extendedPeriodOutput(period)` method should output in the console once per period how much time left from the function first call and increase the period. Example: `// extendedPeriodOutput(100)` -> 100(after 100 ms), 200(after 200 ms), 300(after 300 ms)

Excluded topics

- Iterators and generators

Passing the interview

1. You should contact the mentor personally. Contact details will be announced through Discord.
2. At the request of the mentor, the interview can take place online or face-to-face.
3. During the interview mentor:
 - asks questions;
 - gets answers;
 - adds/corrects/explains/gives the right answer, if necessary.

G'ayrat: junior (july)

Javascript:

- 1) Do you know about Design elements or patterns in Javascript?
- 2) Did you use CI / CD in your projects?
- 3) Data types in Javascript
- 4) What is the execution context?
- 5) What is an event loop? Steps in the event loop?
- 6) What is Promise?
- 7) Differences between Promise and async/await?
- 8) Explain "this" keyword?
- 9) When execution context doesn't work?
- 10) Differences between var/let/const?
- 11) What is closure?
- 12) Differences between arrow fn vs regular fn?
- 13) Do you know about micro/macro tasks

React:

- 1) Which component of react do you know?
- 2) Do you know about state and props? Differences between them?
- 3) What kind of hooks do you know? And explain them?
- 4) Differences between localStorage vs sessionStorage?
- 5) Have you ever built your own hooks? Why we need them?
- 6) What is virtual dom?

Amaliy:

// 1

```
const obj = {  
  name: 'Sam',  
  getName: function () {  
    return this.name  
  }  
}
```

```
const nameofperson = obj.getName
```

```
console.log(nameofperson()); //answer:
```

```
console.log(obj.getName()); //answer:
```

//2

```
for (var i=0; i<4; i++) {  
  setTimeout(() => console.log(i), 0)  
}
```

//3

```
var b = 1
function outer() {
  var b = 2
  function inner() {
    b++
    var b = 3
    console.log(b);
  }
  inner()
}
outer()
```

//4

```
var a = b = 3
console.log(a !== 'undefined');
console.log(b !== 'undefined');
```