

TypeScript

Tahaluf Training Center 2021



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.



Day 03

1 Exercises



Exercises

Exercise _1

Create an object which contains information of the users who pays for meals or restaurant .



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Solution

```
const user: any = {  
  firstName: '',  
  lname: '',  
  orders: [],  
  email: '',  
  isPremium: false  
};
```





Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Exercise _2

Based on exercise one create array which contains all the system users .



Exercises

Solution

```
const systemUsers: any[] = [{  
  firstName: 'Ahmad',  
  lname: 'mk',  
  orders: [],  
  email: 't@t.com',  
  isPremium: true  
},  
{  
  firstName: 'join',  
  lname: 'doe',  
  orders: [],  
  email: 't@t.com',  
  isPremium: false }]
```





Exercises

Exercise _3

Based on Exercise one and two create new array ,
contains Premium users only.



Exercises

Solution_1

```
const premiumUser: any[] = [];  
  for (let index = 0;  
index < systemUsers.length; index++) {  
    if (systemUsers[index].isPremium)  
      premiumUser.push(systemUsers[index])  
  }  
  console.log(premiumUser)
```



Exercises

Solution_2

❖ Using filter method

```
const filteredPremiumsUsers =  
systemUsers.filter((user) =>  
user.isPremium);  
console.log(filteredPremiumsUsers);
```





Exercises

Exercise _4

Based on Exercise one and two create new array ,
contains all premium and odd indexes .



Exercises

Solution

```
const filteredPremiumsUsers2
= systemUsers.filter((user, index) => {
if (user.isPremium && (index + 1 % 2) !== 0) {
    return true;
}
else
return false;
});
console.log(filteredPremiumsUsers2);
console.log(systemUsers);
```





Exercises

Exercise _5

Based on Exercise one and two create new array ,
contains all first name and last name .



Exercises

Solution_1

```
const publiData = [];  
for (let index = 0;  
index < systemUsers.length; index++) {  
    const fnln = {  
        firstName:  
systemUsers[index].firstName,  
        lastName:  
systemUsers[index].lastName  
    }  
    publiData.push(fnln);  
}
```



Exercises

Solution _2

Using De-structure of the object

```
for (let index = 0; index <
systemUsers.length; index++) {
const { firstName: firstName2,
lastName: lastName2 } =
systemUsers[index];
      publiData.push({
        firstName2,
        lastName2
      })
}
```



Exercises

Solution _3

Using map method

```
const publicData =  
systemUsers.map((user, index) => {  
    const { firstName,  
    lastName } = user;  
    return { firstName,  
    lastName };  
})  
console.log(publicData);
```



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Exercise _6

Based on Exercise one and two create new array ,
contains Update all user and set orders to empty [].



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Solution

```
const allUsersUpdated =  
systemUsers.map((user) => {  
    user.order = [];  
    return user;  
})  
console.log('Updated ',  
allUsersUpdated);
```



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Exercise _7

Based on Exercise one and two print all the system users using forEach .



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Solution

```
systemUsers.forEach((user) => {  
    console.log(user);  
})
```



Exercises

Exercise _8

Based on Exercise one and two create new array , contains all users who have Premium or user who have orders more than 0.



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Solution

```
const userspremiumOrNoOrders =  
systemUsers.filter((user) =>  
    user.ispremium ||  
    user.orders.length == 0);
```



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Exercise _9

Based on Exercise one and two print something like
and contains the users info
//?? Labels dynamic.



Exercises

Solution

```
const userInfo: any = {  
  firstName: 'john',  
  lastName: 'doe',  
  age: '20'  
};
```

```
Object.keys(userInfo).forEach((key: any) =>  
{
```

```
  console.log(` ${key}=${userInfo[key]} `);  
});
```



Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Exercise _10

Based on Exercise one and two get all user first name
, last name only if they are premium user



Exercises

Solution

```
const PremiumUsers =  
systemUsers.filter((user) =>  
user.isPremium);  
    const fNameUsers =  
premiumUser.map((user) => {  
        const { firstName,  
lastName } = user;  
        return { firstName,  
lastName };  
    })
```





Exercises



شركة تحالف الإمارات للحلول التقنية ذ.م.م.
TAHALUF AL EMARAT TECHNICAL SOLUTIONS L.L.C.

Search about spread with object in Typescript ..



Exercises

Example :

```
const userA = { fname: 'john',  
lname: 'don' };  
const departmentInfo = {  
name: 'web', section: 1 };  
const fullUser = {  
...userA,  
...departmentInfo  
};  
console.log(fullUser);
```

