

# Exam Preparation II

## 02. Athletes

You can check your solutions in [Judge](#).

### Your Task

Your task is to write a single **function solve()** that performs various data manipulation operations on a given array of athlete objects. You will **add**, **remove**, **update**, and **filter** athletes within this array. The function **solve()** should take an **array** of **athletes** as its **parameter**. **Inside** this **function**, you will define several **methods** to handle specific operations, and **each method** should **return** its **respective message**.

You are provided with an **array** called **athletes** that contains objects. Each object represents an athlete and has the following **properties**:

```
let athletes = [  
  { id: 1, name: "Usain Bolt", sport: "Sprinting", medals: 8, country: "Jamaica" },  
  { id: 2, name: "Michael Phelps", sport: "Swimming", medals: 23, country: "USA" },  
  { id: 3, name: "Simone Biles", sport: "Gymnastics", medals: 7, country: "USA" }  
];
```

Write the following **methods** inside the **solve()** function:

### Filter Athletes by sport

- Write a function **getAthletesBySport(sport)** that takes a **sport** parameter and returns an array of athletes who participate in a given sport.
- The method should return new array with **filtered athletes**.

### Add a new Athlete

- Write a function **addAthlete(id, name, sport, medals, country)** that takes five parameters (**id**, **name**, **sport**, **medals**, **country**) and adds a new athlete to the **athletes** array.
- The method should return **athletes** array with new athlete included.

### Find Athlete by ID

- Write a function **getAthleteById(id)** that takes an **id** parameter and returns the **athlete object** with the **given id**.
- The method should return **athlete object** or `Athlete with ID ${id} not found``

## Remove Athlete by ID

- Write a function **removeAthleteById(id)** that takes an **id** parameter and **removes** the **athlete** with the **given id** from the athletes array.
- The method should return **athletes array without the removed athlete**.
- If the athlete with this ID does not exist, return: ``Athlete with ID ${id} not found``

## Update Athlete's medal count

- Write a function **updateAthleteMedals(id, newMedals)** that takes an **id** parameter and a **newMedals** parameter and updates the medal count of the athlete with the given id.
- The method should return **athletes array with updated athlete medal count**.
- If the athlete with this ID does not exist, return: ``Athlete with ID ${id} not found``

## Update Athlete's country

- Write a function **updateAthleteCountry(id, newCountry)** that takes an **id** parameter and a **newCountry** parameter and updates the country of the athlete with the given id.
- The method should return **athletes array with updated athlete country**.
- If the athlete with this ID does not exist, return: ``Athlete with ID ${id} not found``

At the end of the **solve()** function, **do not forget to include the final return statement** that returns an object with references to all the methods you have defined. This will allow the methods to be called from outside the **solve()** function.

```
return {  
  getAthletesBySport,  
  addAthlete,  
  getAthleteById,  
  removeAthleteById,  
  updateAthleteMedals,  
  updateAthleteCountry  
};
```

## Examples

Input	Output
<pre>const olympics = solve(athletes); olympics.getAthletesBySport("Swimming");</pre>	<pre>[{id: 2, name: 'Michael Phelps', sport: 'Swimming', medals: 23, country: 'USA'}]</pre>
<pre>olympics.addAthlete(4, "Katie Ledecky", "Swimming", 7, "USA");</pre>	<pre>[{id: 1, name: 'Usain Bolt', sport: 'Sprinting', medals: 8, country: 'Jamaica'}, {id: 2, name: 'Michael Phelps', sport: 'Swimming', medals: 23, country: 'USA'}, {id: 3, name: 'Simone Biles', sport: 'Gymnastics', medals: 7, country: 'USA'}, {id: 4, name: 'Katie Ledecky', sport: 'Swimming', medals: 7, country: 'USA'}]</pre>

<code>olympics.getAthleteById(1);</code>	<code>{id: 1, name: 'Usain Bolt', sport: 'Sprinting', medals: 8, country: 'Jamaica'}</code>
<code>olympics.removeAthleteById(2);</code>	<code>[{id: 1, name: 'Usain Bolt', sport: 'Sprinting', medals: 8, country: 'Jamaica'}, {id: 3, name: 'Simone Biles', sport: 'Gymnastics', medals: 7, country: 'USA'}]</code>
<code>olympics.updateAthleteMedals(3, 8);</code>	<code>[{id: 1, name: 'Usain Bolt', sport: 'Sprinting', medals: 8, country: 'Jamaica'}, {id: 2, name: 'Michael Phelps', sport: 'Swimming', medals: 23, country: 'USA'}, {id: 3, name: 'Simone Biles', sport: 'Gymnastics', medals: 8, country: 'USA'}]</code>
<code>olympics.updateAthleteCountry(10, "Canada");</code>	Athlete with ID 10 <b>not found</b>

## Submission

In Judge submit only **solve()** function.