

Vazifa: Dart tilida isolates yordamida "Akvarium" konsol ilovasini yaratish

Vazifa ta'rifi:

Dart tilida baliq akvariumini modellashtiradigan konsol ilovasini ishlab chiqish kerak. Ilovada har bir baliq alohida isolate sifatida taqdim etilishi kerak va baliqlar ko'payishi va o'lishi mumkin bo'lishi kerak, shunda populyatsiya muvozanati saqlanadi.

Asosiy talablar:

1. **Baliqlar alohida isolates sifatida:** Har bir baliq alohida isolate sifatida taqdim etilishi kerak.
2. **Baliqlar ko'payishi:** Baliqlar berilgan o'zgaruvchisi `listPopulationTime` vaqtlarida ko'payishadi, ko'payish vaqti kelganda akvariumdagi baliqlar ro'yhatidan random boshqa jinsdagi baliq tanlab olinadi va bu ikki baliqni id lari olinadi ulardan yangi id yaratiladi.

```
3. var uuid = Uuid();
4. final id = uuid.v1(options: {
5.   "Male": "710b962e-041c-11e1-9234-0123456789ab",
6.   "Female": "710b962e-041c-11e1-9234-0123456789ab",
7. });
8.
9. final gender = Random().nextBool() ? "Male" : "Female";
```

10. **Baliqlar o'lishi:** Baliqlar belgilangan vaqtdan keyin o'lishi kerak. Baliqga tegishli isolate kill bo'lishi va akvarium ro'yhatidan o'chirilishi kerak.
11. **Populyatsiya balansi:** Baliqlar soni ko'payib yoki kamayib ketmasligi kerak.
12. **Ma'lumot chiqarish:** Harbir o'zgarishdan keyin konsolga nima bo'lgani va akvarium haqida ma'lumot chiqarib turishi kerak. Misol: Baliq nobut bo'ldi \n Fish info - id: 12345 | gender: male \n Akvarium info - baliqlar soni: 25 | male: 15 | female: 10

Batafsil ta'rifi:

1. **Fish class:**
 - O'zgaruvchilar:
 - `int id` - baliqning noyob identifikatori.
 - `String firstName` - baliqning ismi.
 - `String lastName` - baliqning familyasi.
 - `Enum gender` - baliqning jinsi ("male" yoki "female").
 - `Duration lifespan` - baliqning hayot davomiyligi.
 - `List<Duration> listPopulationTime` - baliq ko'payish vaqtlari. Vaqtlar random yaratiladi interval [1..3]. Interval baliqlar soniga qarab ko'payadi yoki kamayadi
2. **Aquarium class:**

- O'zgaruvchilar:
 - `Map<String, Isolate> fishList` - akvariumdagi barcha baliqlarning ro'yxati. Bu yerda String baliq id
 - `Random random` - tasodifiy sonlarni yaratish obyekti.
- 3. **Asosiy class:**
 - Dastlabki baliq populyatsiyasini yaratadi.
 - Har bir baliq uchun isolates ishga tushiradi.
 - Akvariumdagi baliqlar populyatsiyasini nazorat qiladi.

O'g'il bola ismlar:

Clifton Hubbard
Daniel Harmon
Damon Holt
Frederick Fields
Bernard Horn
Merle Whitehead
Jeff Frey
Victor Roy
Darrell Phillips
Tony Sharp
Israel Andersen
Cecil Thompson
Gabriel Hamilton
Dan Combs
Neal Morrow
Terrence Rowland
Steve Warren
Julius Parker
Louis Morris
Russ Conway
Emmanuel Patrick
Jessie Lozano
Bobby Sloan
Saul Ritter
Edgar Brady
Andrew Case
Duane Bell
Ivan Mendoza
Eddie Atwood
Carroll Flynn
Rene Conrad
Cary Ferguson
Roberto Gorman
Jimmie Nichols
Scott Rogers

Vincent Dugan
Maurice Nichols
Adrian Ellison
Harold Gleason
Young Booker
Leo Pearson
Barry Salinas
Armando Weaver
Eric Andrade
Sidney Lyons
Zach Zuniga
William Grey
Milton Fritz
Ricardo Rush
Edward Peters

Qiz bola ismlar:

Dixie Hogan
Leigh Khan
Betsy Myer
Candice Kline
Rhonda Moody
Jenna Brown
Sheila McMahon
Rachel Singleton
Rita Mays
Leah Ritter
Sophia Roberts
Natalie Ward
Gabriela Lewis
Rosie Booker
Crystal Crane
Patti Blevins
Elsa Mathis
Sonja Lester
Iris Bauer
Carrie Irwin
Lourdes Cramer
Susana McIntosh
Antonia Hess
Shannon Meyers
Tasha Gibson
Paula Neal
Carmen Minor
Nadine Scott
Sonya Charles
Cecilia Reeves

Janine Medina
Kay McDowell
Fran Franco
Sandra Holland
Beth Steward
Geneva O'Brien
Nell Welsh
Denise Delgado
Joni Calhoun
Abigail Lloyd
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Camille Roach
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Janet Branch
Michele Butler
Rebekah Bassett
Marcia Lyons
Theresa Carson
Natasha Meadows
Francisca Bright