**Testy:**

ORM

var newQuery = \_db.adverts.Where(x => x.AdditionDate > new DateTime(2018, 5, 29, 17, 32, 00) && x.AdditionDate < new DateTime(2018, 5, 29, 17, 35, 00) && x.City=="Katowice").ToList();

Wyniki:

1 - 28

2 - 23

3 - 31

4 - 33

5 - 21

6 - 20

7 - 25

8 - 20

9 - 20

10 – 29

AVG = 25

SQL

cmd.CommandText = "SELECT \* from [BoatsAd].[dbo].Adverts where AdditionDate > '2018-05-29 17:32:00' and AdditionDate < '2018-05-29 17:35:00' and City = 'Katowice'";

Wyniki:

1- 32

2- 20

3- 18

4- 12

5- 34

6- 16

7- 13

8- 12

9- 25

10- 20

AVG = 20.2

ORM

Advert advert = new Advert {

AdditionDate = new DateTime(2018, 5, 29, 17, 32, 00),

AdditionalInformation = "BRAK",

City = "Gliwice",

Email = "matstanik@gmail.com",

FinishDate = new DateTime(2018, 5, 29, 17, 35, 00),

Name = "TEST",

PhoneNumber = "485928375",

SureName = "TEST"

};

var newQuery = \_db.adverts.Add(advert);

\_db.SaveChanges();

Wyniki:

1. - 36

2 - 37

3 - 32

4 - 26

5 - 33

6 - 25

7 - 27

8 - 34

9 - 30

10 – 38

AVG = 32.8

SQL

cmd.CommandText = "INSERT INTO [dbo].[Adverts] ([AdditionDate],[FinishDate],[Name],[SureName],[PhoneNumber],[Email],[City],[AdditionalInformation]) VALUES ('2018-05-29 17:32:00', '2018-05-29 17:35:00', 'TEST', 'TEST', '485928375', 'matstanik@gmail.com', 'Gliwice', 'BRAK')";

Wyniki:

1- 11

2- 10

3- 11

4- 12

5- 25

6- 26

7- 14

8- 31

9- 14

10- 26

AVG = 18

**ORM**

Advert advert = new Advert {

AdditionDate = new DateTime(2018, 5, 29, 17, 32, 00),

AdditionalInformation = "BRAK",

City = "Gliwice",

Email = "matstanik@gmail.com",

FinishDate = new DateTime(2018, 5, 29, 17, 35, 00),

Name = "TEST",

PhoneNumber = "485928375",

SureName = "TEST"

};

Stopwatch stopWatch = Stopwatch.StartNew();

for(int i =0; i<1000; i++){

var newQuery = \_db.adverts.Add(advert);

\_db.SaveChanges();

}

Wyniki:

1. 26324
2. 23220
3. 25186
4. 39473

AVG = 28550,75

**SQL**

for (int i = 0; i < 1000; i++)

{

cmd.CommandText = "INSERT INTO [dbo].[Adverts] ([AdditionDate],[FinishDate],[Name],[SureName],[PhoneNumber],[Email],[City],[AdditionalInformation]) VALUES ('2018-05-29 17:32:00', '2018-05-29 17:35:00', 'TEST', 'TEST', '485928375', 'matstanik@gmail.com', 'Gliwice', 'BRAK')";

cmd.CommandType = CommandType.Text;

reader = cmd.ExecuteReader();

DataTable dt = new DataTable();

dt.Load(reader);

}

Wyniki:

1. 11798
2. 11838
3. 11647
4. 11672

AVG = 11738,75

**ORM**

var newQuery = \_db.adverts.ToList();

Wyniki:

1. 43
2. 43
3. 49
4. 38
5. 40
6. 38
7. 36
8. 42
9. 51
10. 40

AVG = 42

**SQL**

cmd.CommandText = "Select \* from [dbo].[Adverts]";

Wyniki:

1. 29
2. 71
3. 32
4. 24
5. 33
6. 24
7. 30
8. 30
9. 32
10. 33

AVG = 33.8

**ORM**

var newQuery = \_db.subjects.Where(x=>x.Advert.AdditionDate > new DateTime(2018, 5, 31, 12, 09, 50) && x.Advert.AdditionDate < new DateTime(2018, 5, 31, 12, 11, 30)).Select(y=>new { y.AdvertDescription, y.AdvertName, y.Price}).ToList();

Wyniki:

1. 33
2. 34
3. 39
4. 33
5. 35
6. 38
7. 22
8. 30
9. 37
10. 34

AVG = 33.5

**SQL**

cmd.CommandText = "select AdvertName, AdvertDescription, Price from Subjects INNER JOIN Adverts on Adverts.AdvertId = Subjects.AdvertId where (Adverts.AdditionDate > '2018-05-31 12:09:50' and Adverts.AdditionDate < '2018-05-31 12:11:30')";

Wyniki:

1. 27
2. 15
3. 14
4. 41
5. 15
6. 21
7. 15
8. 24
9. 28
10. 27

AVG = 22.7

**TEST SQLMS – select with inner Join**

1. select AdvertDescription, AdvertName, Price from Subjects INNER JOIN Adverts on Adverts.AdvertId = Subjects.AdvertId where (Adverts.AdditionDate > '2018-05-31 12:09:50' and Adverts.AdditionDate < '2018-05-31 12:11:30')

Wyniki:

Próba 1 - Total execution time

15 13 17 10 8 11 8 8 9 11 = > 11.0000

Próba 2 - Total execution time

9 10 10 11 9 9 9 9 7 10 = > 9.3000

1. SELECT 1 AS [C1], [Filter1].[AdvertDescription] AS [AdvertDescription],

[Filter1].[AdvertName] AS [AdvertName], [Filter1].[Price] AS [Price] FROM (SELECT [Extent1].[AdvertId] AS [AdvertId1], [Extent1].[AdvertName] AS [AdvertName], [Extent1].[AdvertDescription] AS [AdvertDescription], [Extent1].[Price] AS [Price]FROM [dbo].[Subjects] AS [Extent1]

INNER JOIN [dbo].[Adverts] AS [Extent2] ON [Extent1].[AdvertId] = [Extent2].[AdvertId] WHERE [Extent2].[AdditionDate] > convert(datetime2, '2018-05-31 12:09:50.0000000', 121) ) AS [Filter1] INNER JOIN [dbo].[Adverts] AS [Extent3] ON [Filter1].[AdvertId1] = [Extent3].[AdvertId] WHERE [Extent3].[AdditionDate] < convert(datetime2, '2018-05-31 12:11:30.0000000', 121)

Wyniki:

Próba 1 - Total execution time

11 11 15 12 13 13 12 10 15 17 = > 12.9000

Próba 2 - Total execution time

14 12 12 12 12 13 12 10 12 11 = > 12.0000

**ORM**

List<Boat> boat = \_db.boats.Where(x=>x.SailBoat.EnginePower> 500).ToList();

foreach(Boat singleBoat in boat)

{singleBoat.Price = 10101;

}\_db.SaveChanges();

Wyniki:

1. 24
2. 29
3. 37
4. 23
5. 28
6. 31
7. 18
8. 29
9. 27
10. 30

AVG = 27.6

**SQL**

cmd.CommandText = "Update Subjects Set Price = 51234 from Subjects INNER JOIN SailBoat on Subjects.SubjectId = SailBoat.SubjectId where SailBoat.EnginePower > 500";

Wyniki:

1. 37
2. 25
3. 26
4. 25
5. 24
6. 16
7. 23
8. 21
9. 33
10. 20

AVG = 25

**ORM**

Boat boat = \_db.boats.Where(x=>x.Advert.Name == "Abby" && x.Advert.SureName == "Halama" && x.Advert.Email == "testUpdate@gmail.com").FirstOrDefault();

boat.SailBoat.EnginePower = 11;

Wyniki:

1. 44
2. 41
3. 42
4. 49
5. 46
6. 48
7. 41
8. 36
9. 44
10. 47

AVG = 43.8

**SQL**

cmd.CommandText = "Update SailBoat Set EnginePower = 22 from SailBoat INNER JOIN Subjects on SailBoat.SubjectId = Subjects.SubjectId Inner JOIN Adverts on Subjects.AdvertId = Adverts.AdvertId where Adverts.Name = 'Abby' and Adverts.SureName = 'Halama' and Email = 'testUpdate@gmail.com'";

Wyniki:

1. 32
2. 18
3. 24
4. 17
5. 21
6. 21
7. 22
8. 47
9. 22
10. 24

AVG = 24.7

**TEST SQLMS – Update with inner Join**

1. Update SailBoat

Set EnginePower = 1

from

SailBoat INNER JOIN Subjects on SailBoat.SubjectId = Subjects.SubjectId

Inner JOIN Adverts on Subjects.AdvertId = Adverts.AdvertId

where

Adverts.Name = 'Abby' and Adverts.SureName = 'Halama' and Adverts.Email = 'testUpdate@gmail.com'

Wyniki:

Próba 1 - Total execution time

11 10 8 11 8 9 6 9 9 9 = > 9.0000

Próba 2 - Total execution time

8 12 7 8 9 8 9 8 10 7 = > 8.6000

DECLARE @0 Decimal

Set @0 ='1'

Declare @1 Int

set @1 = '13053'

Declare @EntityKeyValue1 Int

set @EntityKeyValue1 = '13053'

SELECT

[Limit1].[C1] AS [C1],

[Limit1].[SubjectId] AS [SubjectId],

[Limit1].[AdvertId] AS [AdvertId],

[Limit1].[CategoryId] AS [CategoryId],

[Limit1].[AdvertName] AS [AdvertName],

[Limit1].[AdvertDescription] AS [AdvertDescription],

[Limit1].[Price] AS [Price],

[Limit1].[ProducentName] AS [ProducentName],

[Limit1].[BoatModel] AS [BoatModel],

[Limit1].[Length] AS [Length],

[Limit1].[Beam] AS [Beam],

[Limit1].[Weight] AS [Weight],

[Limit1].[BuiltYear] AS [BuiltYear],

[Limit1].[Draft] AS [Draft],

[Limit1].[Displacement] AS [Displacement]

FROM ( SELECT TOP (1)

[Extent1].[SubjectId] AS [SubjectId],

[Extent1].[AdvertId] AS [AdvertId],

[Extent1].[CategoryId] AS [CategoryId],

[Extent1].[AdvertName] AS [AdvertName],

[Extent1].[AdvertDescription] AS [AdvertDescription],

[Extent1].[Price] AS [Price],

[Extent2].[ProducentName] AS [ProducentName],

[Extent2].[BoatModel] AS [BoatModel],

[Extent2].[Length] AS [Length],

[Extent2].[Beam] AS [Beam],

[Extent2].[Weight] AS [Weight],

[Extent2].[BuiltYear] AS [BuiltYear],

[Extent2].[Draft] AS [Draft],

[Extent2].[Displacement] AS [Displacement],

'0X0X' AS [C1]

FROM [dbo].[Subjects] AS [Extent1]

INNER JOIN [dbo].[Boats] AS [Extent2] ON [Extent1].[SubjectId] = [Extent2].[SubjectId]

INNER JOIN [dbo].[Adverts] AS [Extent3] ON [Extent1].[AdvertId] = [Extent3].[AdvertId]

WHERE ('Abby' = [Extent3].[Name]) AND ('Halama' = [Extent3].[SureName]) AND ('testUpdate@gmail.com' = [Extent3].[Email])

) AS [Limit1]

SELECT

[Extent1].[SubjectId] AS [SubjectId],

[Extent1].[SailsArea] AS [SailsArea],

[Extent1].[IsEngine] AS [IsEngine],

[Extent1].[EnginePower] AS [EnginePower],

[Extent1].[EngineType] AS [EngineType],

[Extent1].[HullType] AS [HullType],

[Extent1].[YachtType] AS [YachtType],

[Extent1].[RudderType] AS [RudderType]

FROM [dbo].[SailBoat] AS [Extent1]

WHERE [Extent1].[SubjectId] = @EntityKeyValue1

UPDATE [dbo].[SailBoat]

SET [EnginePower] = @0

WHERE ([SubjectId] = @1)

Wyniki:

Próba 1 - Total execution time

15 14 12 11 13 10 12 13 10 15 = > 12.5000

Próba 2 - Total execution time

11 12 17 12 12 13 11 16 12 12 = > 12.8000