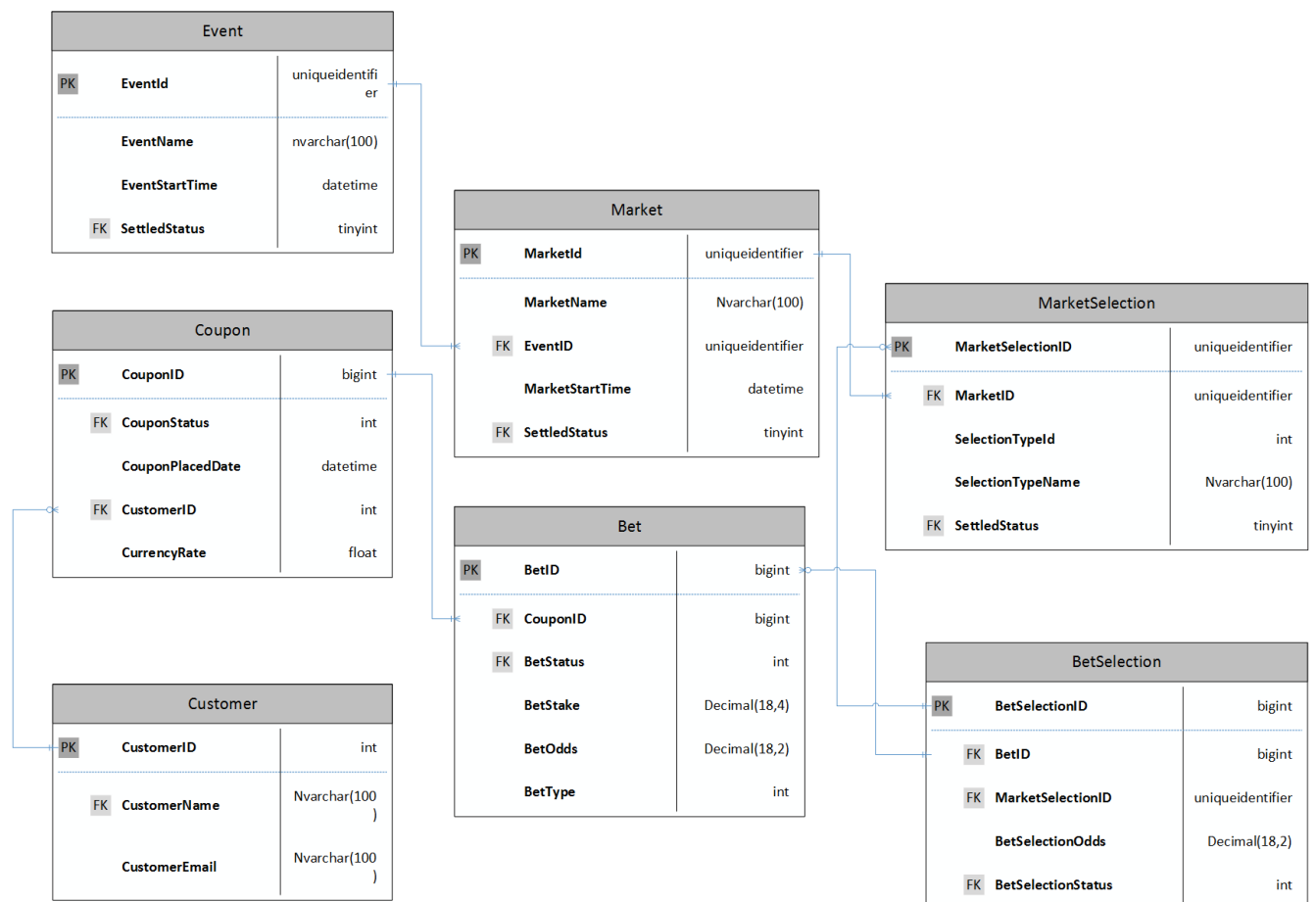


DBA T-SQL Test

Introduction

Bet500 is an i-gaming company that is specialized in sportsbooks products and offers various events and markets where its customers can place their bets. The product offering is developed in-house and they have a database that handles the market information together with the bet transactions. Bet500 is a very successful company handling thousands of concurrent customers and bets, and recently a new business opportunity could potentially double the load.

The database name is Bet500 and this is the schema of the main tables. Sample Data is found on the last page.



1	SELECT TOP 10 * FROM [dbo].[SettledStatus]
2	SELECT TOP 10 * FROM [dbo].[CouponStatus]
3	SELECT TOP 10 * FROM [dbo].[BetStatus]
4	SELECT TOP 10 * FROM [dbo].[BetSelectionStatus]

100 %		<
Results	Messages	
SettledStatus	SettledStatusName	
1	1	Active
2	2	Closed
3	3	Void
CouponStatus	CouponStatusName	
1	1	Open
2	2	Won
3	3	Lost
4	4	Void
BetStatus	BetStatusName	
1	10	Open
2	20	Won
3	30	Lost
4	40	Void
BetSelectionStatus	BetSelectionStatusName	
1	100	Open
2	200	Won
3	300	Lost
4	400	Void

Test Case 1:

The Trading team at Bet500 have requested two reports, one regarding open bets and another one on Settled bets. Considering the schema explained above, please write T-SQL for the following queries:

1. List of open bets showing columns (CouponID, BetID, BetStake, BetOdds), ordered by CouponPlacedDate in ascending order
2. List of settled bets that have a stake of 10 or higher, showing columns (CouponID, BetID, BetStake, EventName, MarketName) ordered by EventStartTime

The above queries will be executed very frequently. Please, provide any tuning suggestions to achieve the best performance, keeping in mind future growth.

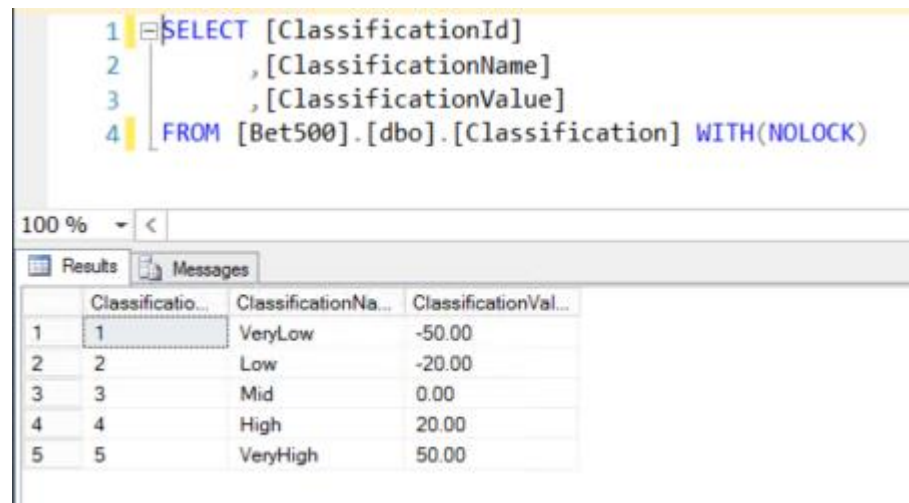
Test Case 2:

The customer team at Bet500 came up with their latest marketing promotion, to give their customers a bonus equivalent to their latest bet placed (settled or not). They have requested you to give them a list of customers with their latest bet placed. The conditions for the customers to participate in this promotion is that the customer must have placed the bet between 11-OCT-2017 and 10-OCT-2018. The following columns are requested (CustomerID, CouponID, BetID, BetStake, CouponPlacedDate) ordered by CustomerID

Test Case 3

The Finance team at Bet500 have asked you to create a report with the following requirements:

1. BetStatistics
 - The Total Amount of BetStake
 - The average BetStake per bet
 - Split my month
 - For settled coupons only
2. Profit/Loss per customer
 - Classify each customer as per table below,
 - Showing the customerID, CustomerName, ClassificationName



The screenshot shows a SQL query window with the following text:

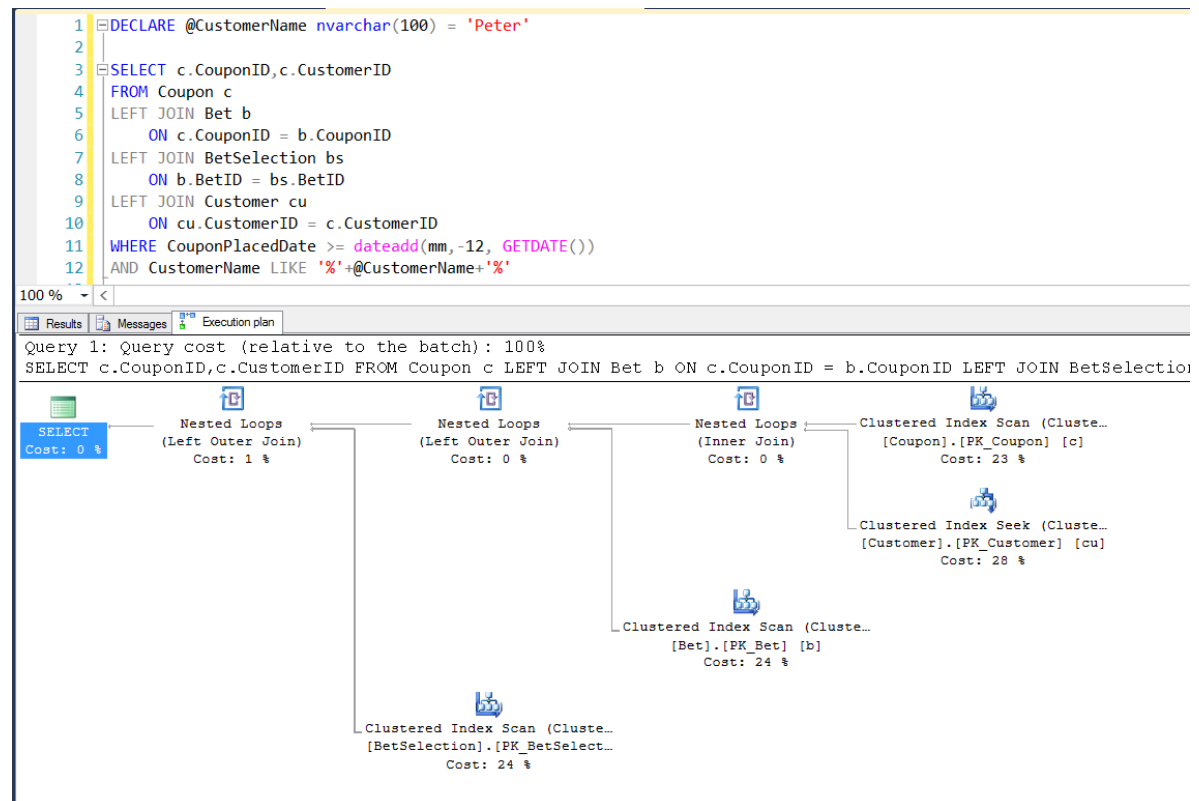
```
1 SELECT [ClassificationId]
2       ,[ClassificationName]
3       ,[ClassificationValue]
4 FROM [Bet500].[dbo].[Classification] WITH(NOLOCK)
```

Below the query window, the 'Results' tab is active, displaying a table with 5 rows and 4 columns. The columns are labeled 'ClassificationId', 'ClassificationName', 'ClassificationValue', and an unlabeled column. The data is as follows:

	ClassificationId	ClassificationName	ClassificationValue	
1	1	VeryLow	-50.00	
2	2	Low	-20.00	
3	3	Mid	0.00	
4	4	High	20.00	
5	5	VeryHigh	50.00	

Test Case 4

Consider the following query and plan. What are the improvements that you would suggest?



Test Case 5

Consider that we need do archiving of coupons and market information. Write SQL queries that will identify the records we should apply archiving on:

- 1) Coupons
 - a. Settled Bets
 - b. Older than 6 months
 - c. Archiving should be done on coupon, bet and betSelection tables
- 2) Markets
 - a. MarketSelections that are not referenced by any bets
 - b. Older than 6 months
 - c. Archiving should be done on event, market, marketselection

Sample Data:

1	SELECT TOP 100 * FROM [dbo].[Event] WITH(NOLOCK)
2	SELECT TOP 100 * FROM [dbo].[Market] WITH(NOLOCK)
3	SELECT TOP 100 * FROM [dbo].[MarketSelection] WITH(NOLOCK)

100 % <

Results	Messages
---------	----------

EventID	EventName	EventStartTime	SettledStatus
1 55FA68A0-58FE-44EE-B43F-17CD4D1FF947	Team2 vs Team3	2018-10-31 16:00:00.000	1
2 51134207-7479-4B5D-A768-3F62F77FC319	Team1 vs Team3	2017-12-01 16:00:00.000	2
3 B3FDD046-D91E-4B00-8638-4F7E2D4F9083	Team2 vs Team4	2017-12-01 16:00:00.000	2
4 0839FA2A-B43C-47AD-AC1D-938B9D5F8CB6	Team3 vs Team4	2017-10-01 16:00:00.000	2
5 DDD90BDA-10DD-4175-880A-DA1C7569BABE	Team1 vs Team2	2017-10-01 16:00:00.000	2
6 92A3B9C0-227D-44D8-BC16-F5453DE1B780	Team1 vs Team4	2018-10-31 16:00:00.000	1

MarketID	MarketName	EventID	MarketStartTime	SettledStat...
1 010BC62A-D14A-45AD-A3FE-00BDE58562EA	1X2	DDD90BDA-10DD-4175-880A-DA1C7569BABE	2017-10-01 16:00:00.000	2
2 55C3539C-DBF3-4EAB-9D4C-0CBF4D9CE937	Over Under 2.5	92A3B9C0-227D-44D8-BC16-F5453DE1B780	2018-10-31 16:00:00.000	1
3 C64ECD36-CEFB-4940-8F19-26E5EFBAB75F	Over Under 2.5	51134207-7479-4B5D-A768-3F62F77FC319	2017-12-01 16:00:00.000	2
4 57E1FBEF-7382-4898-8A84-449D2F48951A	Over Under 2.5	DDD90BDA-10DD-4175-880A-DA1C7569BABE	2017-10-01 16:00:00.000	2
5 B567C8D2-0057-40D0-97E4-54C2BA307C0D	BTTs	55FA68A0-58FE-44EE-B43F-17CD4D1FF947	2018-10-31 16:00:00.000	1
6 E3A99C74-A207-4B9E-81E2-60B6F8584B78	Over Under 2.5	B3FDD046-D91E-4B00-8638-4F7E2D4F9083	2017-12-01 16:00:00.000	2
7 6ADB093E-829E-47C8-BDA1-6147084355AC	Over Under 2.5	0839FA2A-B43C-47AD-AC1D-938B9D5F8CB6	2017-10-01 16:00:00.000	2
8 4BE0C976-A811-4DE8-B1E2-6F47377EA4BE	1X2	92A3B9C0-227D-44D8-BC16-F5453DE1B780	2018-10-31 16:00:00.000	1
9 0C6E0441-06BE-4678-8D5F-90FF6BF9EDF1	1X2	B3FDD046-D91E-4B00-8638-4F7E2D4F9083	2017-12-01 16:00:00.000	2
10 23CBA034-403B-4799-AC34-CE2E521BA9A0	1X2	51134207-7479-4B5D-A768-3F62F77FC319	2017-12-01 16:00:00.000	2
11 EC78F3BB-D2C4-4D45-8144-D9669C1D19B0	1X2	55FA68A0-58FE-44EE-B43F-17CD4D1FF947	2018-10-31 16:00:00.000	1

MarketSelectionID	MarketID	SelectionTyp...	SelectionTypeNa...	SettledStat...
1 D98004FC-69D6-4898-B09C-1936CD757C5D	0C6E0441-06BE-4678-8D5F-90FF6BF9EDF1	3	Away	2
2 1449A9F7-7815-4639-BC74-2267340E926D	4BE0C976-A811-4DE8-B1E2-6F47377EA4BE	3	Away	1
3 8B1F16A9-87F6-4FD4-9892-27760BFD1B3F	12EBB7B0-28C6-43DE-9993-E2E55A55FB1D	2	Draw	2
4 8C3669C4-1E64-4B71-B341-2AB2D673B056	EC78F3BB-D2C4-4D45-8144-D9669C1D19B0	1	Home	1
5 C0EC2CA7-A5F2-4362-A22D-305AC0775AA4	6ADB093E-829E-47C8-BDA1-6147084355AC	4	Over	2
6 A683C1D2-4268-4650-9316-3482DF6B9A9B	23CBA034-403B-4799-AC34-CE2E521BA9A0	3	Away	2
7 6B2447C9-F51E-49CC-8A47-390D4546C518	B567C8D2-0057-40D0-97E4-54C2BA307C0D	7	No	1
8 96BE1F6B-F125-48F7-9AE5-3FCC5C7AFF27	C64ECD36-CEFB-4940-8F19-26E5EFBAB75F	5	Under	2
9 2F22DA15-EFE8-4777-8F40-467945504BEB	4BE0C976-A811-4DE8-B1E2-6F47377EA4BE	1	Home	1
10 92E75037-B42E-4270-A376-4A86080B4D1F	010BC62A-D14A-45AD-A3FE-00BDE58562EA	2	Draw	2
11 B3D90178-B7CE-42BA-99D7-58ADF30EA326	0C6E0441-06BE-4678-8D5F-90FF6BF9EDF1	1	Home	2
12 26471DB5-2ED7-47A3-821E-5A40FE33A671	EC78F3BB-D2C4-4D45-8144-D9669C1D19B0	2	Draw	1
13 188A160E-326F-415A-9687-5E2714D2D24B	B567C8D2-0057-40D0-97E4-54C2BA307C0D	6	Yes	1
14 B927ACD3-A2C4-47F2-B79B-602C0FFC0A5D	0C6E0441-06BE-4678-8D5F-90FF6BF9EDF1	2	Draw	2

```

1 SELECT TOP 100 * FROM [dbo].[Customer] WITH(NOLOCK)
2 SELECT TOP 100 * FROM [dbo].[Coupon] WITH(NOLOCK)
3 SELECT TOP 100 * FROM [dbo].[Bet] WITH(NOLOCK)
4 SELECT TOP 100 * FROM [dbo].[BetSelection] WITH(NOLOCK)

```

100 % <

Results Messages

	Customer...	CustomerName	CustomerEmail
1	1	Michael Andrews	123@mail.com
2	2	Anthony Jones	234@mail.com
3	3	Peter Ford	345@mail.com
4	4	Shane Hamilton	456@mail.com

	Coupon...	CouponStat...	CouponPlacedDate	Customer...	CurrencyR...
1	1	3	2017-10-01 15:45:23.120	1	1
2	2	2	2017-10-01 15:47:38.307	2	1
3	3	3	2017-10-01 15:48:49.630	3	1
4	4	3	2017-12-01 11:45:36.333	4	1
5	5	2	2017-12-01 14:25:34.980	1	1
6	6	3	2017-10-01 15:45:23.120	1	1
7	7	1	2018-10-10 09:27:53.760	2	1
8	8	1	2018-10-10 21:15:13.433	3	1

	BetID	Coupon...	BetStat...	BetStake	BetOd...	BetType
1	1	1	30	10.0000	1.80	1
2	2	2	20	20.0000	1.45	1
3	3	3	30	2.0000	3.47	2
4	4	4	30	12.0000	1.85	1
5	5	5	20	10.0000	2.47	2
6	6	6	30	9.0000	1.91	1
7	7	7	10	5.0000	1.85	1
8	8	8	10	10.0000	4.10	2

	BetSelectio...	Bet...	MarketSelectionID	BetSelectionO...	BetSelectionSta...
1	1	1	92E75037-B42E-4270-A376-4A86080B4D1F	1.80	300
2	2	2	2EBC5D36-AE99-442F-9DDE-B175F44CE419	1.45	200
3	3	3	8F7A5921-AF82-4728-9726-D45730AB9359	2.10	300
4	4	3	C0EC2CA7-A5F2-4362-A22D-305AC0775AA4	1.65	200
5	5	4	625AFA3D-5BC0-4D82-8CBD-C4B2EDDDAC...	1.85	300
6	6	5	A683C1D2-4268-4650-9316-3482DF6B9A9B	1.67	200
7	7	5	B3D90178-B7CE-42BA-99D7-58ADF30EA326	1.48	200
8	8	6	30007257-FAB0-422D-AC64-FAE57E92E96A	1.91	300
9	9	7	00BAC37E-8E71-4768-8DEC-661E780D924E	1.85	100