

## Lesson 3: Natural Query Language

### 3.1 Introduction

Natural Query Language is an interface between the user and company connected to Tally.NET. It uses plain simple English to query and extract information while you are away from the business location. In short Natural Query Language is the way of communicating naturally following the grammar or syntax of the respective language or the way communication happens between two people.

To query information from the connected company, the user needs to type the required words using the mobile phone and send it to the number provided. The system is designed to extract information from the respective company connected and sends back the information to the requestors mobile.

#### 3.1.1 How it works

Tally.ERP 9 understands your query which is in the form of **Natural Query Language**. It has a set of defined rules and uses plain simple English to communicate. When a user requests for information using via SMS. Tally.ERP 9 receives the query and converts it to an understandable format which inturn extracts the required information from the connected company and responds back to the respective user with information in readable format.

#### 3.1.2 Rules

To use SMS Suport you need to follow the set of rules shown below:

- ❑ The Natural Query Language is capable of delivering a single value for a given query, It will not deliver multiple values as the results delivered need to be within limit of characters specified for SMS. You cannot request for a list of pending bills as it may exceeds the specified limit.
- ❑ Short message serive response is defaulted to the previous object. Most objects in Tally.ERP 9 are enabled for access via Natural Query Language Interface. While querying for Company details without any specification, the system defaults the query to a selected Company. On further querying for address, the system defaults it to the company address and returns the Company Address to the requestor mobile. E.g.: The previous query requested for party balance followed by another query for the address. The system returns an SMS with Party Address.
- ❑ While querying the user must provide correct name of the master. Adding master type prefix would help Natural Query Language Interface to understand the query better.



Consider a situation where a company has Sundry Creditor Ledger named Ajay Kumar and another cost centre/employee named Ajay Kumar. When a query is posted, Natural Query Language Interface finds it difficult to handle the request. By default, the system tries to deliver the best match or information encountered first. To overcome this prefix Master Type (**Ledger**) to Ajay Kumar in order to differentiate between the employee/cost centre and Ledger.

- ❑ When a user queries for **Ajay Kumar** the system tries to find and lists all matching objects such as Ajay, Ajay Malik, Ajay Kumar, Kumar, Kumar Krishnan etc. This can be avoided by enclosing **Ajay Kumar** with double quotes which makes it specific to deliver.
- ❑ Link Masters like Bills, Batches, Orders etc. contain numbers as part of their names. This causes ambiguity and the query may yield multiple results. To deliver accurate results all link masters must be prefixed with the link master type. Example: "Bill 0001 Pending Amount", Batch 01234 Expiry Date etc.
- ❑ When two masters/objects are queried the system considers them as primary and secondary returning cross values. E.g.: Closing Balance of Ledger Expenses for Cost Centre Mumbai Branch, the system currently supports Cost Centre/Ledger and vice versa as cross masters.

### 3.1.3 Quick Tips

- ❑ Remove the SMS signature from your mobile phone. The signature is appended to the end of the message sent and makes it difficult for Natural Query Language Interface to understand.
- ❑ While referring to a Masters it is essential to prefix the Master Type. E.g.: Ledger Cash.
- ❑ Use the full names rather than partial names which result in wrong information E.g.: Querying for **ABC & Co** rather than **ABC** may provide wrong or inadequate information.
- ❑ What you see is what you get (WYSWYG). Information you see is also the possible source of information in Tally.ERP 9. E.g.: You see the ledger address in **Ledger Master** screen, similarly you see the **Return on Investment** in **Ratio Analysis** report. While querying it is essential to use the exact names that you see as these titles or prompts return a value. Even though vocabulary is growing to support similar names, sometimes the Natural Language Interface may not understand what you had asked for.
- ❑ Be straight! Do not use words that are not necessary. Ask Tally.ERP 9 what it has or what it knows. When the information you are querying is not forming a part of the data then Natural Query Language Interface will not be able to answer the query posted.

Ask	Cannot Ask
Working Capital	Value of Working Capital
Ledger Kotak Bank Address Closing Balance/Account Number	Kotak Bank Statement
	Purchase orders today
	Sales bills yet to make today



Ask	Cannot Ask
	Cancelled vouchers today
	Sales Vouchers Today
	Vouchers statistics today
Todays Receivables Payables (As two separate Queries)	Todays Receivables and Payable Amount
Quick Ratio Current Ratio (As two separate Queries)	Quick Ratio, Current Ratio
Aravind Kumar Debit Closing	Debit transactions of Arvind Kumar

For an easy understanding of queries using Natural Query Language on various areas of the product we have broadly classified them into the following categories:

- Business
- System

### 3.1.4 Natural Query Language for the Business

The set of commands displayed in the table are illustrated as an example only to get you started on the SMS feature. You can try them out from your mobile phone initially and once you get to know how it works, you can completely adopt the Natural Query Language to extract information from the connected company.

This set of commands from your mobile phone will return the appropriate of the respective ledger or the report.

Word	Possible Aliases	Works Objects for	Values Delivered
<b>Receivables</b>	Receipt Outstanding Receivables Receivable Bills Receivables Bills Receivable Bill Receivable Bill Receivables	Ledger	Returns a receivable value for the specified ledger for a defined period or date.
		Group	Returns a receivable value for the specified group for a defined period or date
		Company	Returns a receivable value for the defined period or date for a selected company



Word	Possible Aliases	Works Objects for	Values Delivered
<b>Payables</b>	Rcpt Outstanding Rcpt OS Receipt OS Receipts Receipt	Ledger	Returns a payable value for the specified Ledger for a defined period or date.
	Payables Payable Bills Payables Bills Payable Bill Payable Bill Payables	Group	Returns a payable value for the specified Group for a defined period or date.
	Payment Outstanding Pymt Outstanding Pymt OS Payment OS Payment Payments	Company	Returns a payable value for the defined period or date of the selected company
<b>Outstanding</b>	Total Outstanding Outstanding Total Outstanding Bills Bills Outstanding Bill Outstanding	Ledger	Returns a outstanding value for the defined period or date for a Ledger
		Company	Returns a outstanding value for the defined period or date of the selected company.
<b>Bank Receipts</b>	Bank Receipt Bank Rcpt Bank Rcpts Bank Debit Total Bank Debit Totals Bank Dr Total Bank Debit Bank Debits	Ledger	Returns the Debit Transaction total for a specified Ledger for the defined period or date.
		Group	Returns the Debit Transaction total for a specified Group or Bank group for the defined period or date.
		Company	Returns the Debit Transaction total for a given Ledger, Group OR Bank group in case of company for the defined period or date.



Word	Possible Aliases	Works for Objects	Values Delivered
<b>Bank Payments</b>	Bank Pymt Bank Payment Bank Pymts Bank Credit Total Bank Credit Totals Bank Cr Total Bank Credit Bank Credits	Ledger	Returns the credit transaction total for the specified Ledger for a defined period or date.
		Group	Returns the credit transaction total for the specified Group or Bank group for a defined period or date.
		Company	Returns the credit transaction total for the given Ledger, Group OR Bank group in case of company for the defined period or date.
<b>Cash Receipts</b>	Cash Receipts Cash Receipt Cash Rcpt Cash Rcpts Cash Debit Total Cash Debit Totals Cash Dr Total Cash Debit Cash Debits	Ledger	Returns the debit transaction total for specified Leger for a defined period or date
		Group	Returns the debit transaction total for specified group for a defined period or date
		Company	Returns the debit transaction total for given Leger, Group or Cash group in case of company for the defined period or date
<b>Cash Payments</b>	Cash Payments Cash Pymt Cash Payment Cash Pymts Cash Credit Total Cash Credit Totals Cash Cr Total Cash Credit Cash Credits	Ledger	Returns the credit transaction total for the specified Ledger for a defined period or date
		Group	Returns the credit transaction total for the specified Group for a defined period or date
		Company	Return the credit transaction total for the given Ledger, Group OR Cash group in case of company for the defined period or date.
<b>BalanceSheet</b>	BSheet BalSheet		Returns the Balance Sheet Debit/Credit total for a defined period or date.



Natural Query Language	Function
Closing Balance of <Ledger>	Returns the closing balance of the respective ledger
Closing Balance of Sales	Returns the closing balance of <b>Sales</b> Ledger
Sales	Returns the closing balance of <b>Sales</b> Ledger
Receivables Bills Receivables	Returns the Amount Receivables
Payables Bills Payables	Returns the Amount Payables
Outstanding	Returns the outstanding amounts
Nett Loss	Dipslays the Nett Loss
Profit	Returns the Profit
Turnover	Returns the tunover
Diff in opening bal	Returns teh amount of opening balance
Stock value Closing stock value Stock closing value	Returns the Stock Value
Closing stock quantity Stock closing quantity, Closing stock qty Stock closing qty	Returns the closing stock value
VAT VAT payable VAT to pay	Returns the VAT Payable amount
Purchases Sales	Returns the closing balance of Sales and Purchases respectively
Ratio Quick ratio Current ratio Equity ratio Debit ratio Operating cost Return on investment ROI Return on invest	Return the respective values for the words sent by SMS



Natural Query Language	Function
Return on working capital Return on wkg capital Return on working cap Return on wkg Cap Inventory turnover	Returns the Working Capital value
Net available stock Nett available stock	Returns the Net Available Stock value
Phone number of <Ledger>	Return the phone number provided for the respective ledger
Mobile Number of <Ledger>	Return the phone number provided for the respective ledger
Account number of <Bank Ledger>	Returns the account number of the respective bank ledger
PAN Number/ Income Tax Number <Ledger>	Returns the PAN Number / Income Tax Number of respective ledger.
Closing balance of Cost Centre Branch Office for Ledger Fixed Costs	Returns the closing balance of the Cost Centre, Branch Office for the respective ledger

### 3.1.5 Business Vocabulary References

The table below shows the words and possible aliases used that can be used while querying information using SMS

#### Masters

Word	Possible Aliases
Ledger	Ledgers
Group	Groups
Cost Centre	Cost Centres, Cost Centers, Cost Center
Cost Category	Cost Categories
Godown	Godowns
Stock Group	Stock Groups
Stock Category	Stock Category
Stock Item	Item, Stock Items
Currency	Currencies
Unit	Units
Budget	Budgets



## Link Masters

Word	Possible Aliases
Bill	Bills
Batch	Batches
Tracking Number	Tracking Numbers
Order	Order

## Business Vocabulary Reference (Object Specific Values)

Word	Possible Aliases	Works for Objects	Values Delivered
Name		Works for most objects	Name of the object specified
Address		Company, Ledger, Employee	Address list separated with space
Closing Balance	Balance, Cl Bal	Most Objects	Closing Balance as on given date

### 3.1.6 Business Vocabulary that is ignored during interaction

In the business vocabulary certain words will be ignored when a valid meaning is not found in the data. The table below shows the set of word that are ignored while querying information from your mobile.

About	Amount	Account	Amt	An
And	Are	As	At	Be
Been	By	Can	Company	Could
Display	Does	Far	For	Get
Give	Has	Have	Hello	Hi
How	I	In	Is	Many
Me	Month	Much	My	No
Nos	Of	On	Or	Pl
Please	Pls	Plz	Provide	Qty
Quantity	Regard	Regards	Reply	Should
Show	SMS	So	Tally	Tell
Than	Thank	Thanks	The	They
Thx	Total	Using	Value	Values
Want	Was	What	Whats	What's
When	Why	Will	With	Would
Year	You			



### 3.1.7 Natural Query Language for the System

The system commands are reserved word that are used exclusively to communicate with the system or reset the context of queries. These commands will not allow the user to extract any information from the connected company.

Natural Query Language	Functions
Hello Hi Tally U There You there Are you there	it checks for availability of connection with Tally.NET or the availability of a respective company.
User User Name Who am I	Returns the name of the authorised user.
Company Cmp Database Name	Returns the name of the company
Thank you Thanks Bye	Reciprocates accordingly
List	Returns the list of online companies that you are authorised to access
Full List	Emails a list of online and offline companies that you are authorised to access
Reset/*	Resets the context of earlier queries
Context/*	Returns the context of the previous set of queries.