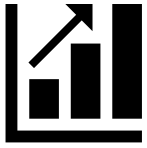
MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

DBS Project Submission

BTech IT (B1) – V SEMESTER

DEPARTMENT OF I&CT, MIT, MANIPAL

Portfolio Management System



ER Diagram & Normalization Table

ABSTRACT

In present scenario of our country, investors on the field of share market are increasing day by day. With hiking shares, people are investing their capital so that it profits them in the future reference. Likewise, people are crazily indulged in this field which may create messy circumstances for managing huge bundles of shares that they hold.

Also, in this busy era
people have no time to analyze fundamental, technical details and the news related to that scrip.

Portfolio management system is in rescue for
this task.

BY:

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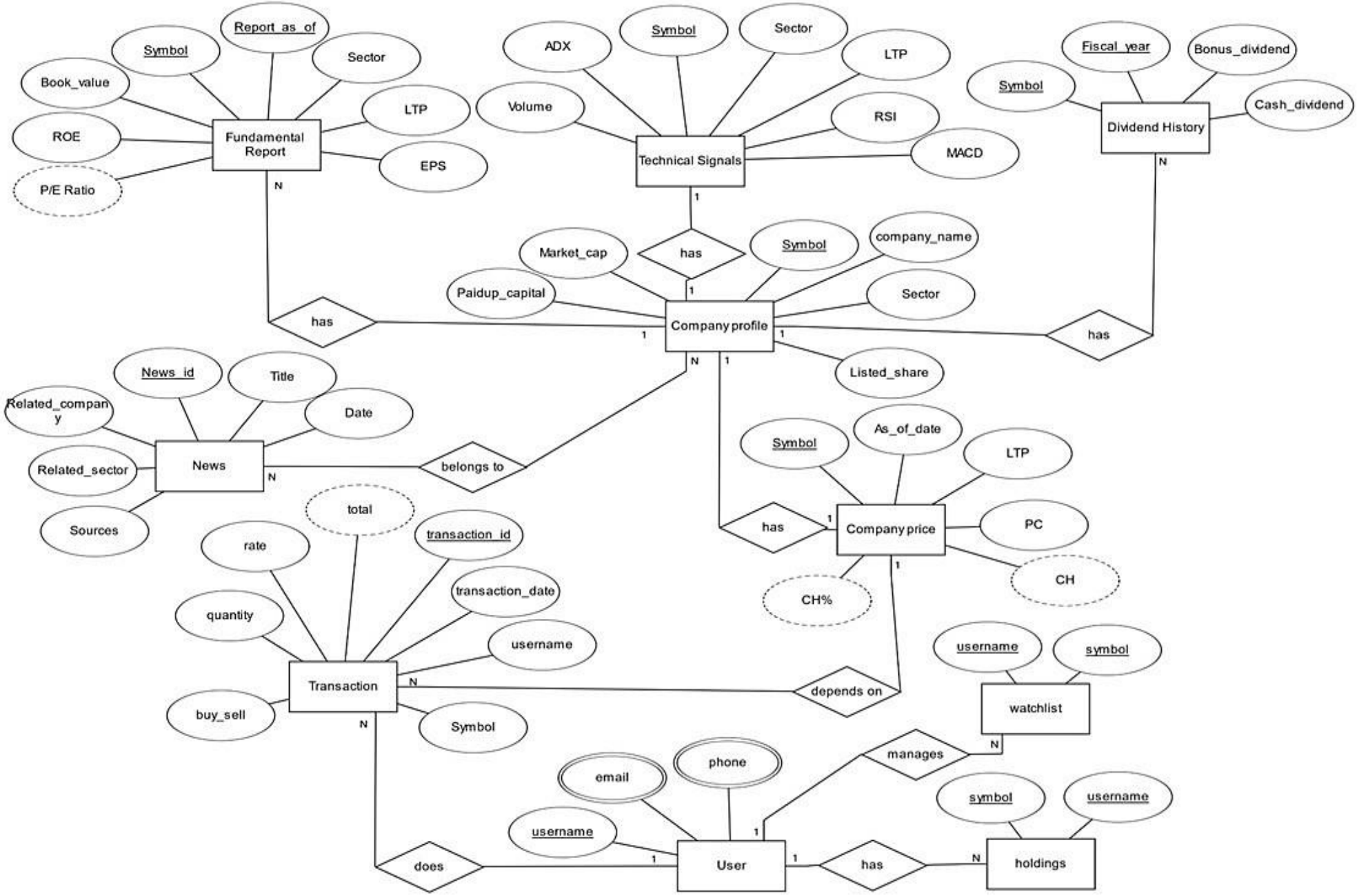
ENTITIES

• Fundamental Report • Technical Signals • Dividend History • News • Transaction	• Company price • Company profile • Watchlist • Holdings • User

ER DIAGRAM


Report_as_of
Symbol
Sector
Book_value
LTP
ROE
Fundamental Report
EPS
P/E Ratio
N
ADX
Symbol
Sector
LTP
Volume
RSI
Technical Signals
MACD
1
Fiscal_year
Bonus_dividend
Symbol
Cash_dividend
Dividend History
N
has
Market_cap
Symbol
company_name
Paidup_capital
Sector
has
Company profile
has
1
N
1
Listed_share
News_id
Title
Related_company
Date
Related_sector
News
belongs to
N
Sources
Symbol
As_of_date
LTP
has
1
Company price
PC
1
CH
CH%
total
rate
transaction_id
transaction_date
quantity
username
Transaction
N
depends on
buy_sell
N
Symbol
username
symbol
watchlist
N
manages
email
phone
symbol
username
username
1
User
1
has
N
holdings
does

CARDINALITY RATIOS

- Fundamental Report has many-to-one relationship with Company Profile.
- Technical Signals has one–to–one relationship with Company Profile.
- Dividend History has many-to-one relationship with Company Profile.
- Company Profile has one–to–one relationship with Company Price.
- Company Profile has many–to–many relationship with News.
- Company Price has one–to–many relationship with Transaction.
- User has one–to–many relationship with Transaction.
- User has one–to–many relationship with Watchlist.
- User has one–to–many relationship with Holdings.

PARTICIPATION CONSTRAINTS

- There is total participation of entity ‘Fundamental Report’ with the ‘has’ relationship in the ER diagram.
- There is total participation of entity ‘Technical Signals’ with the ‘has’ relationship in the ER diagram.
- There is total participation of entity ‘Dividend History’ with the ‘has’ relationship in the ER diagram.
- There is total participation of entity ‘Company Price’ with the ‘has’ relationship in the ER diagram.
- There is **partial participation** of entity ‘Company Profile’ with the ‘belongs to’ relationship with ‘News’ in the ER diagram.
- There is **partial participation** of entity ‘Company price’ with the ‘depends on’ relationship with ‘Transaction’ in the ER diagram.
- There is total participation of entity ‘User’ with the ‘does’ relationship in the ER diagram.
- There is **partial participation** of entity ‘User’ with the ‘has’ relationship with ‘Holdings’ in the ER diagram.
- There is total participation of entity ‘User’ with the ‘manages’ relationship in the ER diagram.

SCHEMAS

- Fundamental Report: Symbol, Report_as_of, LTP, EPS, P/E Ratio, ROE, Book_value
- Technical Signals: Symbol, LTP, RSI, MACD, Volume, ADX
- Dividend History: Symbol, Fiscal_year, Bonus_dividend, Cash_dividend
- News: News_id, Title, Date, Sources, Related_company
- Transaction: Transaction_id,Transaction Date, username, Symbol, Quantity, Rate, Total
- Company price: Symbol, LTP, PC, CH, CH %
- Watchlist: username, symbol
- Company profile: Symbol, company_name, Sector, Listed_share, Paidup_capital, Market_cap
- User: username, email, phone, password

NORMALISED TABLES

Fundamental Report:

Symbol	Report as of	LTP	EPS	P/E Ratio	ROE	Book Value

Technical Signals

Symbol	LTP	RSI	MACD	Volume	ADX

Dividend History:

Symbol	Fiscal year	Bonus dividend	Cash dividend

News:

News id	Title	Date	Sources	Related company

Transaction:

Transaction id	Transaction Date	username	Symbol	Quantity	Rate	Total

Company price:

Symbol	LTP	PC	CH	CH%

Watchlist:

username	Symbol

Company profile:

Symbol	Company_name	Sector	Listed_share	Paidup_capital	Market_cap

User:

username	email	phone	password

JUSTIFICATION FOR NORMALIZATION

- All the above tables are in **3NF** forms.
- By normalizing it in 3NF form, we made sure that there **is no functional dependency** between 2 non-prime attributes.
- NON-PRIME ATTRIBUTES: Set of attributes which do not participate in the formation of the candidate key of a relation.
- All these tables do not have any anomalies (**insertion, deletion, updation**).
- All these tables do not show any **row level** or **column level data redundancies**.