Books:-

Create(:Book{title: "Harry Poter", published:1980 ,tag:[ "English" ,"Hindi"],status: "Library", condition: "New", cost:700, type:"Novel"})

Create(:Book{title: "Wings Of Fire", published:2000 ,tag:[ "English" ,"Hindi"],status: "Library", condition: "New", cost:96, type:"Motivational"})

Create(:Book{title: "Shala", published:2020 ,tag:[ "Marathi" ,"Hindi"],status: "Issued", condition: "Old", cost:170, type:"Suspense"})

Create(:Book{title: "Sherlock Homes", published:1970 ,tag:[ "English" ,"Hindi"],status: "Issued", condition: "New", cost:139, type:"Detective story"})

Auther:

Create(:author{name: "Dr.A.P.J Kalam",city: "Mumbai"})

Create(:author{name: "Sir Doyle",city: "Landon",born: "12-09-1945",death:"03-08-1999"})

Create(:author{name: "J. K. Rowling",city: "New York"})

Create(:author{name: "Milind Bokil",city: "Pune", born: "12-09-1948"})

Reader:

Create(:reader{name: "Vaishnavi"})

Create(:reader{name: "Aditi"})

Create(:reader{name: "Maya"})

Create(:reader{name: "Vidya"})

Create(:reader {name: "Ashok"})

Create(:reader {name: "Moni"})

Publisher:

Create(:publisher{name: "Sneha", city: "Pune"})

Create(:publisher{name: "Ram", city: "Nashik"})

Create(:publisher{name: "Mina", city: "Nashik"})

Reviwers:

Create(:persons {name: "Ajay", remark:4})

Create(:persons {name: "Vijay",remark:5})

Create(:persons {name: "Sahil",remark:5})

Create(:persons {name: "Divya",remark:5})

Create(:persons {name: "Kajal",remark:5})

Create(:persons {name: "Sarika",remark:5})

Relations:

1)Author-Book

Match(a:author),(b:Book)where a.name="Milind Bokil" and b.title="Shala" create(a)-[:WROTE]->(b)return a,b

Match(a:author),(b:Book)where a.name="Dr.A.P.J Kalam" and b.title="Wings Of Fire" create(a)-[:WROTE]->(b)return a,b

Match(a:author),(b:Book)where a.name="J. K. Rowling"and b.title="Harry Poter" create(a)-[:WROTE]->(b)return a,b

Match(a:author),(b:Book)where a.name="Sir Doyle"and b.title="Sherlock Homes"create(a)-[:WROTE]->(b)return a,b

2)Book-Publisher

Match (b:Book),(p:publisher)where b.title="Shala" and p.name="Ram" create(b)-[:PUBLISHEd\_BY]->(p)return b,p

Match (b:Book),(p:publisher)where b.title="Harry Poter" and p.name="Ram" create(b)-[:PUBLISHEd\_BY]->(p)return b,p

Match (b:Book),(p:publisher)where b.title="Harry Poter" and p.name="Mina" create(b)-[:PUBLISHEd\_BY]->(p)return b,p

Match (b:Book),(p:publisher)where b.title="Wings Of Fire" and p.name="Sneha" create(b)-[:PUBLISHEd\_BY]->(p)return b,p

Match (b:Book),(p:publisher)where b.title="Sherlock Homes" and p.name="Sneha" create(b)-[:PUBLISHEd\_BY]->(p)return b,p

3)Book-Reader

Match (b:Book),(r:reader)where b.title="Shala" and r.name="Vidya" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Harry Poter" and r.name="Vidya" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Sherlock Homes" and r.name="Vidya" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Wings Of Fire" and r.name="Aditi" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Wings Of Fire" and r.name="Ashok" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Sherlock Homes" and r.name="Vaishnavi" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Harry Poter" and r.name="Maya" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Shala" and r.name="Ashok" create(b)-[:Read\_BY]->(r)return b,r

Match (b:Book),(r:reader)where b.title="Shala" and r.name="Moni" create(b)-[:Read\_BY]->(r)return b,r

5)IssuedBy

Match (b:Book),( p:persons)where b.title="Shala" and p.name="Sarika" create(b)-[:Issued\_BY]->(p)return b,p

Match (b:Book),( p:persons)where b.title="Harry Poter" and p.name="Divya" create(b)-[:Issued\_BY]->(p)return b,p

4)Book-Review

Match (b:Book),(p:persons)where b.title="Harry Poter" and p.name="Ajay" create(b)-[:Review\_BY]->(p)return b,p

Match (b:Book),(p:persons)where b.title="Shala" and p.name="Vijay" create(b)-[:Review\_BY]->(p)return b,p

5)Recommended

Match (b:Book),(p:persons)where b.title="Wings Of Fire" and p.name="Kajal" create(b)-[:RECOMMENDED\_BY{Date:"12-10-2001" }]->(p)return b,p

Match (b:Book),(p:persons)where b.title="Sherlock Homes" and p.name="Sahil" create(b)-[: RECOMMENDED\_BY{Date:"02-10-1972" }]->(p)return b,p

1. List all people, who have issued a book “……”

Match (b:Book)-[i:Issued\_BY]->(p:persons) where b.title="Shala" return p.name

1. Count the number of people who have read “ ….”

Match(b:Book)-[i:Read\_BY]->(r:reader) where b.title="Sherlock Homes" Return count(r)

1. Add a property “Number of books issued “ for Vidya and set its value as the count

Match(n {name:"Vidya"}) SET n.Number of books issued=

1. List the names of publishers from pune city.

Match(p:publisher)where p.city="Pune" return p.name

1. List all readers who have recommended either book “…” or “……..” or “……..”

Match (b:Book)-[:RECOMMENDED\_BY]->(p:persons) where b.title="Wings Of Fire" or b.title="Sherlock Homes" return p

1. List the readers who haven’t recommended any book-

match (p:persons) where not (:Book)-[:RECOMMENDED\_BY]->(p:persons) return p

c) List the authors who have written a book that has been read / issued by maximum number

of readers.

Match (a:author)-[:WROTE]->(b:Book) Match (b:Book)–[:Read\_BY]->(r:reader) with count(r) as cnt,b,a With max(cnt) as max Match (a:author)-[:WROTE]->(b:Book) Match (b:Book) –[:Read\_BY]->(r:reader) with count(r) as cnt,max,a Where max=cnt return a.name

d) List the names of books recommended by “……….” And read by at least one reader

Match(b:Book)-[:RECOMMENDED\_BY]->(p:persons{name: "Sahil"})

Match (b:Book)-[:Read\_BY]->(r:reader) with count(r) as cnt,b where cnt>0 return b

1. List the names of books recommended by “………” and read by maximum number of readers.

Match(b:Book)-[:RECOMMENDED\_BY]->(p:persons{name: "Sahil"}) Match (b:Book)–[i:Read\_BY]->(r:reader) with count(r) as cnt,b,p With max(cnt) as max Match(b:Book)-[:RECOMMENDED\_BY]->(p:persons{name:"Sahil"}) Match (b:Book)–[:Read\_BY]->(r:reader) with count(r) as cnt,b,p,max where max=cnt return b.title

1. List the names of publishers who haven’t published any books written by authors from Pune and Mumbai.

Match(a:author)-[:WROTE]->(b:Book) Match (b:Book)-[:PUBLISHEd\_BY]->(p:publisher) where a.city<>"Pune" <>"Mumbai" return p.name

g) List the names of voracious readers in our library

MATCH (p:persons) WHERE NOT (:Book)-[:Issued\_BY]->(p:persons)

RETURN p.name