var filmoj = ["Comedy", "Drama", "Romance", "Adventure", "Children", "Fantasy", "Crime", "Thriller", "Horror", "Action", "Sci-Fi", "Mystery", "Documentary", "IMAX", "Musical", "WAR", "Film-Noir", "Western"];

var prob\_filmoj =[]; var broj = 0;

for(film=0;film<filmoj.length;++film)

{

var verojatnosti\_zanr = [

{

"\_id" : 0, "count" : 0, "prob" : 0

},

{

"\_id" : 0.5, "count" : 0, "prob" : 0

},

{

"\_id" : 1, "count" : 0, "prob" : 0

},

{

"\_id" : 1.5, "count" : 0, "prob" : 0

},

{

"\_id" : 2, "count" : 0, "prob" : 0

},

{

"\_id" : 2.5, "count" : 0,

"prob" : 0

},

{

"\_id" : 3, "count" : 0, "prob" : 0

},

{

"\_id" : 3.5, "count" : 0, "prob" : 0

},

{

"\_id" : 4, "count" : 0, "prob" : 0

},

{

"\_id" : 4.5, "count" : 0, "prob" : 0

},

{

"\_id" : 5, "count" : 0, "prob" : 0

}

];

var gledani\_filmoj = db.ratings.aggregate([ {$lookup:

{

from: "movies", localField: "movieId", foreignField: "movieId", as: "movie\_details"

}}, {$match:

{"userId":3, "movie\_details.genres":{$regex : ".\*" + filmoj[film] + ".\*"}}

},

{$group: {

\_id: "$rating", count: { $sum: 1 }, prob: { $sum: 1 }

}}

]).toArray(); for(i=0;i<verojatnosti\_zanr.length;++i)

{

for(j=0;j<gledani\_filmoj.length;++j)

{

if(gledani\_filmoj[j].\_id==verojatnosti\_zanr[i].\_id)

{

verojatnosti\_zanr.splice(i,1,gledani\_filmoj[j]);

}

}

}

var sum=0; for(i=0;i<verojatnosti\_zanr.length;++i)

{

if(verojatnosti\_zanr[i].count==0)

{

verojatnosti\_zanr[i].count=1;

}

else

{

verojatnosti\_zanr[i].count+=(11 - gledani\_filmoj.length);

}

sum+=verojatnosti\_zanr[i].count;

}

for(i=0;i<verojatnosti\_zanr.length;++i)

{

verojatnosti\_zanr[i].prob=(verojatnosti\_zanr[i].count/sum); verojatnosti\_zanr[i].type=filmoj[film];

}

prob\_filmoj.splice(broj, 1, verojatnosti\_zanr); ++broj;

}

var prob\_to\_rate1 = [

{

"\_id" : 0, "count" : 0,

"prob" : 0

},

{

"\_id" : 0.5, "count" : 0, "prob" : 0

},

{

"\_id" : 1, "count" : 0, "prob" : 0

},

{

"\_id" : 1.5, "count" : 0, "prob" : 0

},

{

"\_id" : 2, "count" : 0, "prob" : 0

},

{

"\_id" : 2.5, "count" : 0, "prob" : 0

},

{

"\_id" : 3, "count" : 0, "prob" : 0

},

{

"\_id" : 3.5, "count" : 0, "prob" : 0

},

{

"\_id" : 4, "count" : 0, "prob" : 0

},

{

"\_id" : 4.5, "count" : 0, "prob" : 0

},

{

"\_id" : 5, "count" : 0, "prob" : 0

}

];

var prob\_to\_rate2=[]; var prob\_to\_rate=[];

prob\_to\_rate2 = db.ratings.aggregate([ {$lookup:

{

from: "movies", localField: "movieId", foreignField: "movieId", as: "movie\_details"

}},

{$match: { 'userId': 3}}, {$group: {

\_id: "$rating", count: { $sum: 1 }, prob: { $sum: 1 }

}}

// { $project : { \_id: 0, movieId : 1 } } ]).toArray();

for(i=0;i<prob\_to\_rate1.length;++i)

{

for(j=0;j<prob\_to\_rate2.length;++j)

{

if(prob\_to\_rate2[j].\_id==prob\_to\_rate1[i].\_id)

{

prob\_to\_rate1.splice(i,1,prob\_to\_rate2[j]);

}

}

}

var sum=0; for(i=0;i<prob\_to\_rate1.length;++i)

{

if(prob\_to\_rate1[i].count==0)

{

prob\_to\_rate1[i].count=1;

}

else

{

prob\_to\_rate1[i].count+=(11 - prob\_to\_rate2.length);

}

sum+=prob\_to\_rate1[i].count;

}

for(i=0;i<prob\_to\_rate1.length;++i)

{

prob\_to\_rate1[i].prob=(prob\_to\_rate1[i].count/sum);

}

var watched\_movies=[]; watched\_movies = db.ratings.aggregate([

{$lookup:

{

from: "movies", localField: "movieId", foreignField: "movieId", as: "movie\_details"

}},

{$match: { 'userId': 3}}

// { $project : { \_id: 0, movieId : 1 } } ]).map(function(res){

return res.movieId; });

var movies\_not\_watched=[]; db.movies.count()

movies\_not\_watched = db.movies.find({ "movieId" : { $nin: watched\_movies}}).toArray(); //print(prob\_filmoj)

var rejting\_za\_film=[]; var brojac=0;

var prob\_za\_rating=[];

movies\_not\_watched.forEach(function(res){ var zanrovi=[];

zanrovi = res.genres.split("|");

var rating\_types=[0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5]; var max=0;

var tip=0;

for(i=0;i<rating\_types.length;++i)

{

var verojatnost = 1;

for(j=0;j<prob\_filmoj.length;++j)

{

if(zanrovi.includes("Comedy") && prob\_filmoj[j][i].type=="Comedy")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Drama") && prob\_filmoj[j][i].type=="Drama")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Romance") && prob\_filmoj[j][i].type=="Romance")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Adventure") && prob\_filmoj[j][i].type=="Adventure")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Children") && prob\_filmoj[j][i].type=="Children")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Fantasy") && prob\_filmoj[j][i].type=="Fantasy")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Crime") && prob\_filmoj[j][i].type=="Crime")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Thriller") && prob\_filmoj[j][i].type=="Thriller")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Horror") && prob\_filmoj[j][i].type=="Horror")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Action") && prob\_filmoj[j][i].type=="Action")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Sci-Fi") && prob\_filmoj[j][i].type=="Sci-Fi")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Mystery") && prob\_filmoj[j][i].type=="Mystery")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Documentary") && prob\_filmoj[j][i].type=="Documentary")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("IMAX") && prob\_filmoj[j][i].type=="IMAX")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Musical") && prob\_filmoj[j][i].type=="Musical")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("WAR") && prob\_filmoj[j][i].type=="WAR")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Film-Noir") && prob\_filmoj[j][i].type=="Film-Noir")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

if(zanrovi.includes("Western") && prob\_filmoj[j][i].type=="Western")

{

verojatnost\*=prob\_filmoj[j][i].prob;

}

}

verojatnost\*=prob\_to\_rate1[i].prob; if(verojatnost>max)

{

max=verojatnost;

tip=i;

}

}

var tmp\_niza=[]; tmp\_niza[0]=res.movieId; tmp\_niza[1]=res.title; tmp\_niza[2]=res.genres; tmp\_niza[3]=rating\_types[tip]; tmp\_niza[4]=max; rejting\_za\_film.splice(brojac, 1, tmp\_niza); ++brojac;

});

function compare(a,b) { if (a[3] > b[3])

return -1;

if (a[3] < b[3])

return 1; return 0;

}

//print(rejting\_za\_film.sort(compare)); function checkKraj(x) {

return x == 2.5;

}

var indeks = rejting\_za\_film.findIndex(checkKraj)-1; var nova\_rejting\_lista = [];

nova\_rejting\_lista = rejting\_za\_film.slice(0, indeks);

function newCompare(a,b) { if (a[4] > b[4])

return -1;

if (a[4] < b[4]) return 1; return 0;

}

print(rejting\_za\_film.sort(newCompare));