**Report 1: Responded Analysis**

**Code:**

loansDefault\_qry = [

{

"$group": {

"\_id": "$responded ",

"count": { "$sum": 1 }

}

},

{

"$project": {

"\_id": 0,

"Responded": "$\_id",

"count": 1,

"percentage": {

"$concat": [

{ "$toString": { "$multiply": [ { "$divide": [ "$count", total\_count ] }, 100 ] } },

"%"

]

}

}

}

]

results2 = mycol.aggregate(loansDefault\_qry)

print('Number of People responded')

print('Responded(Y/N)\tCount\tPercentage')

for cust1 in results2:

print("{}\t{}\t{}".format(cust1['Responded'],cust1['count'],cust1['percentage']))

print("\n\n")

A screen shot of a computer

Description automatically generated with medium confidence

**Report 2: Preferrable contact Analysis**

**Code:**

loansDefault\_qry = [

{

"$group": {

"\_id": "$contact",

"count": { "$sum": 1 }

}

},

{

"$project": {

"\_id": 0,

"Responded": "$\_id",

"count": 1,

"percentage": {

"$concat": [

{ "$toString": { "$multiply": [ { "$divide": [ "$count", total\_count ] }, 100 ] } },

"%"

]

}

}

}

]

results2 = mycol.aggregate(loansDefault\_qry)

print('Preferrable Contact Analysis')

print('Preferrable-Contact-Type\tCount\tPercentage')

for cust1 in results2:

print("{}\t{}\t{}".format(cust1['Responded'],cust1['count'],cust1['percentage']))

print("\n\n")

A screenshot of a computer

Description automatically generated

**Report 3: Marital status Analysis**

**Code:**

numEmps\_qry = [

{

"$group": {

"\_id": "$marital",

"count": { "$sum": { "$cond": [{ "$eq": ["$responded ", 'yes'] }, 1, 0] } }

}

},

{

"$match": {

"count": { "$gt": 0 }

}

}

]

results = mycol.aggregate(numEmps\_qry)

print("Marital Status\tCount")

for cust in results:

print("{}\t{}".format(cust["\_id"],cust["count"]))

A picture containing text, multimedia software, software, graphics software

Description automatically generated

**Report 4: Marital vs Responded Analysis**

employeesDefault\_qry = [

{

"$group": {

"\_id": {

"eType": "$marital",

"loanType": "$responded "

},

"total": {

"$sum": 1

}

}

},

{

"$group": {

"\_id": "$\_id.eType",

"eType": {

"$push": "$$ROOT"

},

"total": {

"$sum": "$total"

}

}

},

{

"$addFields": {

"eType": {

"$map": {

"input": "$eType",

"in": {

"\_id": "$$this.\_id",

"count":"$$this.total",

"percentage": {

"$multiply": [

{

"$divide": [ "$$this.total", total\_count ]

},

100

]

}

}

}

}

}

},

{

"$unwind": "$eType"

},

{

"$replaceRoot": {

"newRoot": "$eType"

}

}

]

results = mycol.aggregate(employeesDefault\_qry)

print("MaritalStatus\t|Responded(Y/N)\t|Count\t|Percentage")

for cust in results:

print("{}\t|{}\t|{}\t|{}".format(cust['\_id']['eType'], cust['\_id']['loanType'], cust['count'], cust['percentage']))

A screenshot of a computer

Description automatically generated

**Report 5: Profession vs Responded Analysis**

**Code:**

employeesDefault\_qry = [

{

"$group": {

"\_id": {

"eType": "$profession",

"loanType": "$responded "

},

"total": {

"$sum": 1

}

}

},

{

"$group": {

"\_id": "$\_id.eType",

"eType": {

"$push": "$$ROOT"

},

"total": {

"$sum": "$total"

}

}

},

{

"$addFields": {

"eType": {

"$map": {

"input": "$eType",

"in": {

"\_id": "$$this.\_id",

"count":"$$this.total",

"percentage": {

"$multiply": [

{

"$divide": [ "$$this.total", total\_count ]

},

100

]

}

}

}

}

}

},

{

"$unwind": "$eType"

},

{

"$replaceRoot": {

"newRoot": "$eType"

}

}

]

results = mycol.aggregate(employeesDefault\_qry)

A screenshot of a computer

Description automatically generated

