

#1.

```
db.Users.aggregate([
  {
    $group: {
      _id: "$country",
      active_users: { $sum: 1 }
    }
  },
  {
    $sort: { active_users: -1 }
  },
  {
    $limit: 10
  }
]);
```

#2.

```
db.Payment_Options.aggregate([
  {
    $group: {
      _id: "$card_type",
      count: { $sum: 1 }
    }
  },
  {
    $sort: { count: -1 }
  },
  {
    $limit: 10
  }
]);
```

#3.

```
db.Transactions.aggregate([
  {
    $group: {
      _id: "$user_id",
      total_spent: { $sum: "$amount" }
    }
  },
  {
    $lookup: {
      from: "Users",
      localField: "_id",
      foreignField: "user_id",
      as: "user_info"
    }
  },
  {
    $project: {
```

```

        user_id: "$_id",
        user_email: { $arrayElemAt: ["$user_info.email", 0] },
        total_spent: 1
    }
},
{
    $sort: { total_spent: -1 }
},
{
    $limit: 10
}
]);

```

#4.

```

db.Has.aggregate([
    {
        $lookup: {
            from: "Users",
            localField: "user_id",
            foreignField: "user_id",
            as: "user_info"
        }
    },
    {
        $unwind: "$user_info"
    },
    {
        $group: {
            _id: "$user_id",
            device_changes: { $sum: 1 },
            user_email: { $first: "$user_info.email" }
        }
    },
    {
        $sort: { device_changes: -1 }
    },
    {
        $limit: 10
    }
]);

```