**UDACITY FINAL PROJECT**

**COMMUNICATE DATA FINDING**

**INTRODUCTION**

Every Individual have their own wishes in their every stage of life .Sometimes that wish comes with a cost , In order to achieve it and balance it with their daily life.People go for loans .But ,Selection of a Loan is a very calculative decision because we have to manage expenses and set out priorities accordingly. And This project is on a data set from Prosper, which is America’s first marketplace lending platform, with over $7 billions in funded loans.

## **DATA OVERVIEW**

This data consist of 113,937 loans with 81 variables on each loan, including loan amount, borrower rate (or interest rate), current loan status, borrower income, borrower employment status,Investors,Category Band, borrower credit history, and the latest payment information. The main purpose of this project is to summarize the characteristics of variables that can affect the loan status and to get some ideas about the relationships among multiple variables using summary statistics and data visualizations

**univariate Analysis**

In [9]:

## **1.Current Loan Status**

## INSIGHTS

## This graph shows the status of loans according to which nearly 500 loans are stated as default which can affect the total funding of bank.

## **2.Term wise distribution**

the distribution of loan on the basis of the paying time (LOAN PERIOD)

INSIGHTS  
The above bar plot shows that people generally prefer loans which has paying tme of nearly 36 months.

**Monthly Stated Income**

INSIGHTS

The maximum loan takers have monthly incomes range between 45000- 55000 (approximately)

# Bivariate analysis

**1.Borrower rate vs number of Investors**

INSIGHTS

This plot depicts a clear picture between the number of investors and borrowing rate . But in the range between 0-100 . They are all types of Borrowing rates are available but generally more than 200+ investors are consistently have gone with more than 0.1 Borrowing Rate

**2.Credit Grade vs Income**

INSIGHTS

This plot depicts a clear picture between the number of investors and borrowing rate . But in the range between 0-100 . They are all types of Borrowing rates are available but generally more than 200+ investors are consistently have gone with more than 0.1 Borrowing Rate

**3.Prosper Rate rating Annually**

INSIGHTS

Prosper Rate is decline continuously till 2011 and there is a sudden fall in the year 2010-2011 . Some External factors might have affected the Prosper rate.

In [23]:

**4.Borrower Rate rating Annually**

INSIGHTS

For analyzing Borrower rate through out the previous years .In 2006 there was a suuden hike in the Borrower\_Rate.

**MULTIVARIATE ANALYSIS**

INSIGHTS:-

Analyzing the people's choices of loan on the basis of the term(Total Time Period) provided to repay the loan back.

Early People mainly go for 36 months period with borrowing rate of 0.2 to 0.3 but in the middle low borrowrate with 12 months was also preferred but in 2013 and 2014 only 36 months and 60 months period is preffered