```
/* SAS Code for Regression (using BAC data) */

DATA bac;
      input BAC   beers;
      datalines;
      .10   5
      .03   2
      .19   9
      .12   8
      .04   3
      .095  7
      .07   3
      .06   5
      .02   3
      .05   5
      .07   4
      .10   6
      .085  5
      .09   7
      .01   1
      .05   4
      .     5.5   * See note 5.b.i below for an explanation why this is here;
      ;
run;


/* Note: PROC REG can be slow to run. Be patient.   */

PROC reg data=bac;

      model bac = beers / clb cli clm; * specify the model as y = x;
                                       *SAS will know to include the intercept term;
run;
```

Notes about this code:

1) The slash character (/) in the `model` statement is used to separate options from the model itself
2) `clb` requests confidence intervals for the parameter estimates (slope and intercept)
   a) Appears in the **Parameter Estimates** table
3) `cli` requests a prediction interval for each individual predicted value
   a) Appears in a new table, called **Output Statistics** , in the column **95% CL Predict**
4) `clm` requests a confidence interval for the average value of the response
   a) Appears in a new table, called **Output Statistics** , in the column **95% CL Mean**
5) For both `cli` and `clm`, SAS produces one interval for each subject in the dataset
   a) So these intervals will automatically be provided for each observed value of *X*
   b) You can get these intervals for other values by adding new rows to the dataset that include the requested value of *X* and have the value of the response variable as missing (denoted with a '.')
      i) For example: To create a prediction interval for an individual who had consumed 5 and a half beers, put the following at the end of the `datalines` portion of the **DATA** step: `. 5.5`
6) For more information see:
   https://support.sas.com/documentation/cdl/en/statug/63033/HTML/default/viewer.htm#statug_reg_sect013.htm