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Demo: Performing Simple Linear Regression Using the Linear Regression Task

Because there's a significant Pearson correlation between **SalePrice** and several continuous variables in the **ameshousing3** data set, use the Linear Regression task to build a simple linear regression model. Use **Lot_Area** as the predictor variable to determine exactly how a change in the **Lot_Area** is associated with a change in the **SalePrice**.

1. In the Navigation pane, select **Tasks and Utilities**.
2. Expand **Tasks**.
3. Expand **Statistics** and open the **Linear Regression** task.
4. Select the **stat1.ameshousing3** table.
5. Assign **SalePrice** to the Dependent variable role.
6. Assign **Lot_Area** to the Continuous variables role.
7. On the MODEL tab, click the **Edit this model** icon to specify the Model effects.
8. In the Model Effects Builder window, select **Lot_Area** and click **Add** under Single Effects.
9. Click **OK** to close the Model Effects Builder window.
10. On the OPTIONS tab, under PLOTS, expand **Scatter Plots** and clear the check box for **Observed values by predicted values**.
11. Click **Run**.

Generated Code

```
ods noproctitle;
ods graphics / imagemap=on;

proc reg data=STAT1.AMESHOUSING3 alpha=0.05 plots(only)=(diagnostics residuals fitplot);
   model SalePrice=Lot_Area /;
run;
quit;
```