Python Program Output (Terminal)

```
Question 1
Mean values of height: 66.96
Mean values of earnings: 46875.32
Question 2
Scatterplot is on the pdf
Question 3
                            OLS Regression Results
==============================================================================
Dep. Variable:               earnings   R-squared:                       0.01
Model:                            OLS   Adj. R-squared:                  0.01
Method:                 Least Squares   F-statistic:                     196.
Date:                Fri, 13 Oct 2023   Prob (F-statistic):           2.13e-4
Time:                        20:57:47   Log-Likelihood:            -2.0755e+0
No. Observations:               17870   AIC:                         4.151e+0
Df Residuals:                   17868   BIC:                         4.151e+0
Df Model:                           1
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975
------------------------------------------------------------------------------
Intercept   -512.7336   3386.856     -0.151      0.880   -7151.299    6125.83
height       707.6716     50.489     14.016      0.000     608.708     806.63
==============================================================================
Omnibus:                   346151.826   Durbin-Watson:                   1.68
Prob(Omnibus):                  0.000   Jarque-Bera (JB):             1827.91
Skew:                           0.397   Prob(JB):                        0.0
Kurtosis:                       1.649   Cond. No.                     1.13e+0
==============================================================================
```

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Question 3(a)
Sample Size: 17870
Question 3(b)
R-squared: 0.01
Question 3(c)
Estimated Slope: 707.67
Question 3(d)
Predicted Earnings for 70 inches tall worker: 49024.28
Question 4
                            OLS Regression Results
==============================================================================
Dep. Variable:               earnings   R-squared:                       0.021
Model:                            OLS   Adj. R-squared:                  0.021
Method:                 Least Squares   F-statistic:                     168.2
Date:                Fri, 13 Oct 2023   Prob (F-statistic):           4.47e-38
Time:                        20:57:47   Log-Likelihood:                -91674.
No. Observations:                7896   AIC:                         1.834e+05
Df Residuals:                    7894   BIC:                         1.834e+05
Df Model:                           1
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
Intercept  -4.313e+04   7068.481     -6.102      0.000    -5.7e+04   -2.93e+04
height      1306.8599    100.766     12.969      0.000    1109.332    1504.388
==============================================================================
Omnibus:                    72396.208   Durbin-Watson:                   1.667
Prob(Omnibus):                  0.000   Jarque-Bera (JB):              782.879
Skew:                           0.317   Prob(JB):                     1.00e-170
Kurtosis:                       1.594   Cond. No.                     1.65e+03
==============================================================================
```

```
Question 4(a)
Sample Size:  7896
Question 4(b)
R-Squared:  0.02
Question 4(c)
Estimated Slope: 1306.86
Question 4(d)
The predicted earnings for a woman 1 inch taller than the average are higher than the average earnings for women by $1306.86.
```

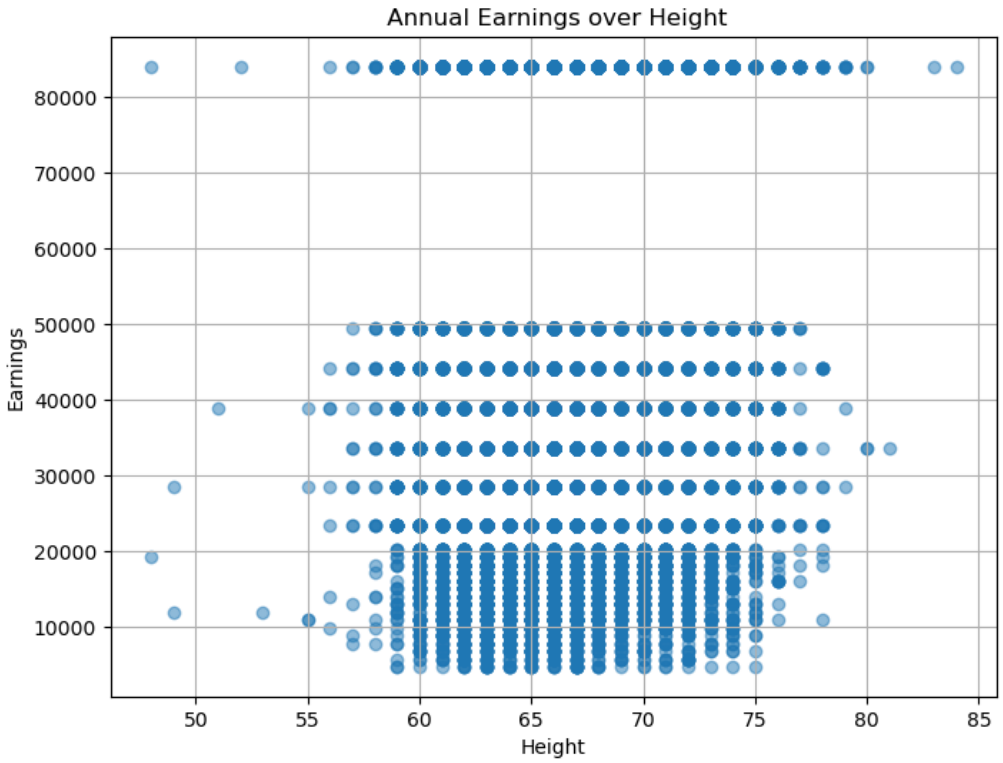
Python Program Output (Text)

Question 1

Mean values of height: 66.96

Mean values of earnings: 46875.32

Question 2



Question 3

OLS Regression Results

Dep. Variable:	earnings	R-squared:	0.011
Model:	OLS	Adj. R-squared:	0.011
Method:	Least Squares	F-statistic:	196.5
Date:	Fri, 13 Oct 2023	Prob (F-statistic):	2.13e-44
Time:	20:57:47	Log-Likelihood:	-2.0755e+05
No. Observations:	17870	AIC:	4.151e+05
Df Residuals:	17868	BIC:	4.151e+05
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	-512.7336	3386.856	-0.151	0.880	-7151.299	6125.832
height	707.6716	50.489	14.016	0.000	608.708	806.635

Omnibus:	346151.826	Durbin-Watson:	1.683
Prob(Omnibus):	0.000	Jarque-Bera (JB):	1827.913
Skew:	0.397	Prob(JB):	0.00
Kurtosis:	1.649	Cond. No.	1.13e+03

Question 3(a)

Sample Size: 17870

Question 3(b)

R-squared: 0.01

Question 3(c)

Estimated Slope: 707.67

Question 3(d)

Predicted Earnings for 70 inches tall worker: 49024.28

Question 4

OLS Regression Results

Dep. Variable:	earnings	R-squared:	0.021
Model:	OLS	Adj. R-squared:	0.021
Method:	Least Squares	F-statistic:	168.2
Date:	Fri, 13 Oct 2023	Prob (F-statistic):	4.47e-38
Time:	20:57:47	Log-Likelihood:	-91674.
No. Observations:	7896	AIC:	1.834e+05
Df Residuals:	7894	BIC:	1.834e+05
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	-4.313e+04	7068.481	-6.102	0.000	-5.7e+04	-2.93e+04
height	1306.8599	100.766	12.969	0.000	1109.332	1504.388

Omnibus:	72396.208	Durbin-Watson:	1.667
Prob(Omnibus):	0.000	Jarque-Bera (JB):	782.879
Skew:	0.317	Prob(JB):	1.00e-170
Kurtosis:	1.594	Cond. No.	1.65e+03

Question 4(a)

Sample Size: 7896

Question 4(b)

R-Squared: 0.02

Question 4(c)

Estimated Slope: 1306.86

Question 4(d)

The predicted earnings for a woman 1 inch taller than the average are higher than the average earnings for women by $1306.86.