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| IPO and Data Dictionary | | | | |
| Variable/Constant name | **Description** | **Input** | **Processing** | **Output** |
| BR | HTML line break | "<br />" |  |  |
| ES | extra space | " " |  |  |
| LE | line end | "." |  |  |
| initial\_price | building price year 2010 | 2010 price |  |  |
| intial\_year | initial year of calculation | first year |  |  |
| final\_price | building price year 2011 | 2011 price |  |  |
| final\_year | final year of calculation | second year |  |  |
| difference | calculated difference |  | difference = final\_price-initial\_price | difference |
| percentage | calculated % |  | percentage =difference/initial\_price \* 100 | percent change |

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| Date: |
| Description: |

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| Coding | |
| //Programmer: | Nanette K. Hartley, Ph. D. |
| //Language: | JavaScript |
| //Program Name: | buildingPriceInc.html |
| //Date: | 10/8/2013 |
| //Description: | Calculates the percentage change in the price of a building between two different years |
| //Declaration of variables and constants | |
| var name = 0 or ES; see definitions above. | |
| //Program Heading | |
| document.write("Hello! Welcome to the building change calculator!" + BR + BR); | |
| //Requesting Input | |
| name = prompt("Would you like to calculate a percent change on this building? If so, we need a name on the building.");  initial\_year = prompt("What is the initial year of the calculation?");  initial\_price = prompt("What is the initial price of the building?")  parseFloat(intial\_price);  final\_year = prompt("What is the final year of the calculation?");  final\_price = prompt("What is the final price of the building?");  parseFloat(final\_price); | |
| //Processing | |
| difference = final\_price – initial\_price;  percentage = (difference \* 100)/intial\_price;  if (percentage < 0)  {  change = "percent decrease";  }  else  {  change = "percent increase";  } | |
| //Required Output | |
| document.write("The name of the building is:" + ES + name + ES + "Building" + LE + BR);  document.write("The cost of the building in" + ES + intial\_year + ES + "was: $" + initial\_price + LE + ES + ES + "The cost of the building in" + ES + final\_year + ES +"was: $" + final\_price + LE + BR);  document.write("The difference in price of the" + ES + name + ES + "building is: $" + difference + LE + BR);  document.write("The" + ES + change + ES + "of the" + ES + name + ES + "building from" + ES + initial\_year + ES + "to" + ES + final\_year + ES + "is:" + ES + percentage.toFixed(2) + "%" + LE + BR + BR); | |
| //Thank the user and end program | |
| document.write("Thank you for using the Building Change Calculator!" + BR); | |