Write a defining table and then a program that computes and outpus the absolute difference between two numbers entered by a user. In other words, your program should always show the difference as a positive number.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Enter two numbers  H and s | if H > s , output H – s  else , output s -H | Return output |

prompt = require("prompt-sync")();

let h = prompt ("enter first number: ");

let s = prompt ("enter second number: ");

h = parseInt(h);

s = parseInt(s);

if ( h > s){

  console.log(h -s)

}

else

console.log(s-h);

2. Write a defining table and a program that helps a user choose the correct foot wear for the day’s weather. The following table shows the weather types the user may enter and what your program should output.

Weather Footwear

Hot sandle

Rain galoshes

Snow boots

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Enter Weather | if Hot output sandle  if Rain output glaoshes  if snow output boots | Return output |

prompt = require("prompt-sync")();

let weather = prompt ("Enter weather")

if (weather = "hot"){

  console.log("sandles");

}

else if (weather = "rain"){

  console.log("galoshes");

}

else if (weather = "snow")

  console.log("boots")

3. Write a defining table and then a program that reads from the keyboard a student’s name and number of completed university credits and then outputs the student’s name and year in school according to the table.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Enter Student name  Enter number of university credits | If the credits < 30 freshman  If the credits < 60 sophomore  If the credits < 90 Junior  Others senior | Return student name and their school year |

prompt = require("prompt-sync")();

let name = prompt ("enter student's name: ");

let credit = prompt ("enter university credit: ");

credit = parseInt(credit);

if (credit < 30){

  console.log("freshman");

} else if (credit < 60){

  console.log("sophomore");

} else if (credit < 90){

  console.log("junior");

} else {

  console.log("senior")

}

4. A bank will not loan money to a homebuyer unless the homebuyer pays for part of house at the time of purchase. This initial payment is called a down payment and is based on the cost of the home. The Bank of Ririe calculations down payments according to this schedule.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Input cost of the house | If cost < 50,000  Dp = 0.05\* cost  If cost < 100,000  Dp = 2000 + 0.10(cost – 50,000)  If cost < 200,000  Dp = 7500 + 0.20(cost -100,000)  Else  Dp = 27,500 + .25 (cost – 200,000) | Return Dp |

prompt = require("prompt-sync")();

let cost = prompt('Enter the cost of the house: ');

cost = parseInt(cost);

if (cost < 50000){

  dp = 0.05 \* cost;

} else if ( cost < 100000){

  dp = 2000 + 0.10 \*(cost - 50000)

} else if ( cost < 200000){

  dp = 7500 + 0.20 \*(cost - 100000)

} else {

  dp = 27500 + 0.25 \*(cost - 200,000)

}

console.log(dp);

5. A university library that loans books to students , faculty and the public has a written policy that determines how long someone may borrow a book before it is due.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Input student or faculty or other  Input Overdue books in the last year | If student  Number of books overdue last year = 0   * 6 weeks   Number of books overdue last year < 3   * 4 weeks   Else   * 2 weeks   If faculty  Number of books overdue last year = 0   * 16 weeks   Number of books overdue last year < 3   * 12 weeks   Else   * 8 weeks   If others  Number of books overdue last year = 0   * 4 weeks   Number of books overdue last year < 3   * 3 weeks   Else   * 2 weeks | Return the number of loan duration for books |

prompt = require("prompt-sync")();

let person = prompt("Enter student or fauclty or other: ");

let overdue = prompt ("Number of books overdue last year");

overdue = parseInt(overdue);

if ( person = "studnet"){

  if ( overdue === 0){

    ld = "6 weeks";

  } else if (overdue < 3){

    ld = "4 weeks";

  } else

   ld = "2 weeks";

}

else if (person = "faculty"){

    if (overdue === 0){

      ld = "16 weeks";

    } else if ( ovedue < 3){

      ld = "12 weeks";

    } else

    ld = "8 weeks";

}

else if (person = "other"){

   if ( overdue === 0){

     ld = "4 weeks";

   } else if ( overdue < 3){

     ld = "3 weels";

   } else

   ld = "2 weeks";

}

console.log(ld);

7. Write a defining table and then a program that determines what time a child should go to bed. Your program must read a child’s age and the season(winter, spring, summer , or fall) from the keyboard and output the child’s bedtime according to this table.

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Input age  Input season | If age < 5  If summer or fall   * 8:30 pm   If winter or spring   * 8:00 pm   Else if age < 12  If summer   * 9:30 pm   if winter , spring, fall   * 8:30 pm   If age >=13  If summer   * 10:30 pm   If winter, spring, fall   * 9:30 pm | Return time to go to bed |

prompt = require("prompt-sync")();

let age = prompt("age of the child :");

let weather = prompt("enter current weather as summer or fall or winter or spring :");

age = parseInt(age);

if (age <= 5) {

  if (weather == "summer" || weather == "fall"){

    time = "8:30 pm";

  } else {

    time = "8:00 p.m";

  }

}

if (age <= 12){

  if (weather == "summer"){

    time = "9:30 pm";

  } else {

    time = "8:30 pm";

  }

}

if (age >= 13){

  if (weather == "summer"){

    time = "10:30 pm";

  } else {

    time = "9:30 pm";

  }

}

console.log(time);

Write a program to get an integer input from user and outputs if the entered number is even or odd.

prompt = require("prompt-sync")();

let x = prompt ("enter integer: ");

x = parseInt(x);

if ((x % 2) == 0 ){

  console.log("even")

} else {

  console.log("odd")

}