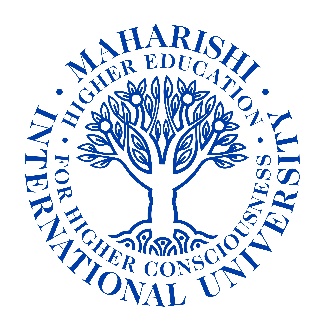
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**Assignment#4 – If Statements**

**Write the code for the following questions:**

**Question 1)** Write a program that takes an integer as input and returns "Even" if the number is even and "Odd" if the number is odd.

**Answer:**

**// get the input number from the user**

let num = parseInt(prompt("Please enter an integer:"));

**// use if-else to know odd even**

if(num% 2 === 0){

console.log("The number you have entered is even")

}else{

console.log("The number you have entered is odd.")

}

**Question 2)** Write a program that takes three numbers as input and returns the largest of the three numbers.

**Answer:**

**// get the input 3 number from the user**

let num1 = parseInt(prompt("Please enter the num1 "))

let num2 = parseInt(prompt("Please enter the numb2"))

let num3 = parseInt(prompt("Please enter the numb3"))

**//compare the number to know which one is largest and displaying the largest number among them**

if(num1 >= num2 && num1 >= num3){

console.log("The num1 is greatest number");

} else if(num2 >= num1 && num2 >= num3){

console.log("The num2 is greatest number.")

}else{

console.log("The num3 is greatest number.")

}

**Question 3)** Write a program that takes a numerical grade as input (0-100) and returns the corresponding letter grade based on the following scale: A (90-100), B (80-89), C (70-79), D (60-69), and F (0-59).

**Answer:**

**// get the numerical grade from the user input**

let grade = parseInt(prompt("Please enter the grade:"));

**// using the if-else to know the grade and displaying the grade letter**

if(grade >= 90){

console.log("You have obtained grade A.")

} else if (grade >=80){

console.log("You have obtained grade B.")

} else if (grade >=70){

console.log("You have obtained grade C.")

}else if (grade >=60){

console.log("You have obtained grade D.")

}else if (grade >=50){

console.log("You have obtained grade F.")

}else{

console.log("You are failed.")

}

**Question 4)** Write a program (ATM) that takes two arguments: the account balance (balance) and the amount to withdraw (withdrawalAmount). Implement the following logic using if statements:

If the withdrawalAmount is greater than the balance, return "Insufficient funds."

If the withdrawalAmount is not a multiple of 10, return "Please enter a multiple of 10."

If the withdrawalAmount is valid (sufficient funds and a multiple of 10), calculate the new balance after the withdrawal and return both "Withdrawal successful" and the new balance.

**Answer:**

**// get the input from the user input**

let balance = parseFloat(prompt("Please enter the balace amount:"));

let withdrawalAmount = parseFloat(prompt("Please enter the amount to be withdrawal:"));

let remainingBalance = balance - withdrawalAmount;

**//what is balance is less than amount to be withdrawal**

if(balance < withdrawalAmount){

console.log("Insufficient funds.")

**//what if withdrawalAmount id not multiple of 10**

}else if (withdrawalAmount % 10 !=0){

console.log("Please enter a multiple of 10.")

}else{

**//displaying the remaining balance and withdrawal successful.**

console.log("Your new balance is:" + " " + remainingBalance);

console.log("withdrawal successful.")

}

**In class Demos:**

**Qn1**

**If luggage weight is or less than 30, there will be no fee at all.**

**If luggage weight is between 30 to 35, there will be $10 fee.**

**If luggage weight is more than 35, then there will be fee $10 plus extra $5 per lbs.**

let lugWeight = Number(prompt("Please enter the luggage weight:"));

const AllowableWeight = 30;

let extraWeight = lugWeight - AllowableWeight;

if (lugWeight <= 30) {

console.log("There will be no fee applicable:");

} else if (lugWeight > AllowableWeight && lugWeight < 35) {

console.log("There will be $10");

} else if (lugWeight > 35) {

console.log(extraWeight \* 5 + 10)

}

**Bonus Qns:**

1. **Write a Javascript program to calculate the fee when placing luggage on a weight scale based on the following**:

Less or equal to 30 lb :: fee = 0$

1. Between 30-35 lb :: fee = 10$
2. Greater than 35 lb :: fee = 10$ + (5$ for every extra pound)

**Answer:**

1. let LugWt = parseFloat(prompt("Please enter the luggage weight:"))
2. let allowablWt = 30;
3. let extraWt = LugWt-allowablWt;
4. let extraP = extraWt \*5 + 10;
5. if (LugWt <=30){
6. console.log("There will be no fees.")
7. }else if (LugWt <=35){
8. console.log("There will be $10 fees.")
9. }else{
10. console.log(extraP)
11. }

**Question 1)** Write a JavaScript program that calculates the price of a movie ticket based on the age of the customer and the time of the movie. If the customer is under 12 or over 65, they get a 10% discount. If the movie is a matinee (before 5 PM) there will also be an additional 20% discount. Display the ticket price according to the age and movie time.

**Answer:**

**//get the age and fee for the shows and show time from the customer**

let showTime = parseFloat(prompt("Please enter the show time:"))

let age = parseInt(prompt("Please enter the age of the customer:"));

let fee = parseFloat(prompt("Please enter the fee for the show:"));

**//Initialize the discounted fee**

let discountedFee = 0;

**//case of nested-if: if show time is before 5(considering time is in 24 hour a day format) and also age is between the given range**

**// Assuming show time start only at exact every hour**

if(showTime < 17){

if(age < 12 || age > 65 ){

discountedFee = fee\*(0.7);

console.log("Your ticket price will be:" + "$ " +

discountedFee)

}else{

//**//case of nested if -else: if show time is before 5(considering time is in 24 hour a day format) but age is not between the given range**

discountedFee = fee\*0.9;

console.log("Your fee will be: " + "$ "+

discountedFee)

}

}else{

**// else**

discountedFee = fee;

console.log("Your fees will be: "+ "$"+discountedFee)

}

**Question 2)** Write a java program that calculates the late fee for library books. The function should take the due date and the return date as inputs and displays the late fee based on the following rules:

* $0.25 per day for the first 7 days late.
* $0.50 per day for the next 7 days late.
* $1.00 per day for each additional day late after the initial 14 days.

**Answer:**

**//get the return date and due date from the user**

let returnDate = parseInt(prompt("Please enter the return date:"));

let dueDate = parseInt(prompt("Please enter the due date:"));

**//get the number of days delayed**

let dayDelayed = returnDate - dueDate;

//get the late fee:

let lateFee = 0;

**//solve the first condition:**

if(dayDelayed <= 0){

lateFee =0;

console.log("You pay $" + lateFee + ".")

}else if(dayDelayed <=7){

lateFee = dayDelayed \* 0.25;

console.log("You pay $" + lateFee + ".")

}else if(dayDelayed <=14){

lateFee = dayDelayed \* 0.50;

console.log("You pay $" + lateFee + ".")

}else{

lateFee = dayDelayed \* 1;

console.log("You pay $" + lateFee + ".")

}

**Question 3)** Write a java program that takes a credit number and card type and validates credit card based on the following conditions:

* The card number must be exactly 16 digits long.
* It should start with a '4' for Visa, '5' for Mastercard, or '3' for American Express.
* It should display "Valid".
* otherwise display "Invalid."

**Answer:**

let creditCardN = prompt("Please enter the credit card number:");

let cardLength = creditCardN.length;

if (cardLength === 16) {

if (creditCardN.charAt(0) === '4') {

console.log("Valid. It's a visa card.")

} else if (creditCardN.charAt(0) === '5') {

console.log("valid. It's a Master card.")

} else if (creditCardN.charAt(0) === '3') {

console.log("Valid. It's a American Express card.")

}

} else {

console.log("Invalid Entry. Please try again correctly.")

}