**TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES**

**QUEZON CITY**

**COLLEGE OF INFORMATION TECHNOLOGY EDUCATION (CITE)**

**ITE001- Computer Programming 1**

**NAME: Buenaventura, Aristotle**

**PROGRAM/SECTION: IS11S1**

**ASSESSMENT TASK: Iterative or Repetition Control Structure using switch, while and do while loop**

*The following question support the attainment of Course Intended Learning Outcomes (CILO):*Design computing based solution using control structures, functions, array and other statements

INSTRUCTION: Write a program that will let the user to enter a number and display the output based on CHOICES below.

**SOURCE CODE:**

#include<iostream>

using namespace std;

main(){

int num;

int ctr;

int trans;

int sum = 0;

int product = 1;

string name, section;

cout << "Enter your name: ";

cin >> name; // Users will input their name

cout << "Enter your section: ";

cin >> section; // Users will input their section

cout << " \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"; // Information box

cout << "\n \* Name: " << name << " \*";

cout << "\n \* Section:" << section << " \*";

cout << "\n \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\n Enter a number: ";

cin >> num; // Users will input a number

cout << "\n Transaction";

cout << "\n 1.Display ascending order from 1 to " << num << " using do while"; // Ascending order

cout << "\n 2.Display ascending order from 1 to " << num << " using while"; // Ascending order

cout << "\n 3.Display descending order from " << num << " to 1 using while"; // Descending order

cout << "\n 4.Display descending order from " << num << " to 1 using do while"; // Descending order

cout << "\n 5.Display all numbers divisible by 3 from 1 to " << num << " using do while"; // Divisible by 3

cout << "\n 6.Display all numbers divisible by 8 from 1 to " << num << " using while"; // Divisible by 8

cout << "\n 7.Display the sum of 1 to " << num <<" using do while"; // Sum

cout << "\n 8.Display the product of 1 to " << num <<" using while"; // Product

do { // do while loop

cout << "\n\n Enter transaction: ";

cin >> trans; // Users will choose from 1 to 8 transactions

switch(trans) { // switch statement

case 1: // Ascending order

ctr = 1;

do {

cout << ctr << " ";

ctr++;

} while (ctr <= num);

break;

case 2: // Ascending order

ctr = 1;

while (ctr <= num) {

cout<<ctr <<" ";

ctr++;

}

break;

case 3: // Descending order

ctr = num;

while (ctr >= 1) {

cout << ctr << " ";

ctr--;

}

break;

case 4: // Descending order

ctr = num;

do {

cout << ctr << " ";

ctr--;

} while (ctr >= 1);

break;

case 5: // Divisible by 3

ctr = 1;

do {

if (ctr % 3 == 0) {

cout << ctr << " ";

} ctr ++;

} while (ctr <= num);

break;

case 6: // divisible by 8

ctr = 1;

while (ctr <= num) {

if ( ctr % 8 == 0) {

cout << ctr << " ";

} ctr++;

}

break;

case 7: // sum

ctr=1;

do{

sum += ctr;

ctr++;

} while (ctr<=num);

cout<< "The sum is "<<sum;

break;

case 8: // product

ctr = 1;

while (ctr <= num) {

product \*= ctr;

ctr++;

}

cout<< "The product is "<<product;

break;

default: // Invalid input

cout<< "Invalid";

isExit = true;

break;

} //end of switch

} while(trans <= 8); // end of do while

} //end of main

OUTPUT ( SCREEN SHOT all output from case 1 to 8)

