2) A) In C++, for loops, while loops and do-while loops are used for negetition. Each of these loops has its own syntax and cases.

The differences are given below with examples:

For Loop:

1. The loop initialization, condition and update one all defined within the Good's header.

2. The loop condition checked before entering the loop.

OM 400 2 3

Example:

for (inti=1) 12=5; itt) BE

cont << i << " ";

output: 1 2 3 4 5

While Loop:

1. This loop is used when developeth / programmer wants to execute a block of code as long as a certain condition is true.

2. The condition is checked before entering the

Example: int count = 1; cout ex count ex ";

greount ++; output: of 2003 his renged heard and Do-while Loop: Ans a made glandman soul a 1. This loop is used when Leveloper/programmer wants to execute a block of code at least once and then continue to execute it as long as a certain condition is true. 2. The condition is checked after the Gop body, ensuring that the loop body always executes at least once. 2. Contine Example: all desint soils a los bresset of souther all out flow of a host and many ob the green word court pet is the trustige with I torr itt; und france all is stad while (iz=5); (=1/1) outputio 1 2 3 4 5 (surifies)

B/ The break and continue keywords are used to control the flow of loops. 1. Break : The 'meat' negund is used to exit a loop Rematurely when a certain condition is met. tool for Cintis 15 1 s is (10; i) et) Est 10 11, shiff(i==5) { it cos really been some abpears vois bros modras a co educado de la contrata del contrata de la contrata de la contrata del contrata de la contrata del contrata de la contrata de la contrata del contrata de la contrata del contrata del contrata de la contrata del contrata de 2. Continue: Frongle. The 'continue' keyword is used to suit the current flow of a loop and more to the next flow without executing the nemaining code in the current flow. for (inti=1; i <2005; i+4) {

if (i==052) {

i(2=05) }

c) Nested if-else:

In programming code, if it has have one if-else statement inside another if-baselse statement, creating a nested if else structure. This is us.

It is useful when programmer needed to check multiple conditions securentially. Each inner if-else statement is executed based on the condition of the outer if-else statement.

example:

int num = 15

if (num >10) {

cout << " Number is greater than 10."

Le endl;

if (num > 20) {

cout LL "Number is also greater than 20." LL endl;

else {

cont LC "Number is not greater than 20. " LL end;

else {

cont < < "Number is not greater that 10.10

? (lend);

102/5-11 Lallage Nested Loop: Nested 1009s are 100Ps inside other loops. They are used for making multiple repeation of centain blocks of cole on

Example:

for (int i=0; i23; i++) {

for (int j=0; j2i+1; j++) {

count 22 (12) (12);
}

nepeating two different codes/tasks.

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Hore outer loop prints "x" and outer loop prints the endline.

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D) Fre costing refers to the process of converting the data type of an expression on a variable into different data type. Type a costing one two types:

1. Explicit, 2. Implicit.

1. Explicit Type easting.

This is done automatically by the compiler when programmer mixes different data types in an expression on rationable. It converts the data type of one operand to match the data type of the other operand.

int sum a = 510;

float b = 2.5;

float nesult = a+b;

cout << nesult;

output: 3.5

Here, implicitly costs a to flood data type for the addition.

2. Explicit Type costing:

This is performed explicitly by the programmer Les using cousting operators such like (int), (float), (double) etc. to cacharge the data type of value. data type of value.

Example:

float Pi = 3.1416;

cout of (int) pije

output: 3 . brango notto sit to

Here, explicitly converts float bata type to int data type. Extend booker

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