CAMARINES SUR POLYTECHNIC COLLEGES
PPOLYTECHNIC STATE UNIVERSITY OF BICOL

MIDTERM PROJECT/EXAM
Compilation of Learning Task

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Assignment/Activity 1.1

Instructions: For high/Medium level Technology: Please log in to your CSPC LeOnS and submit your answer on Activity 1.2.1 and 1.2.2.
For Low Level Technology. Use this page as an answer sheet and shall be submitted on the next Drop-off/Pick Up schedule, write your name and section on the space provided.

Learning Task 1.2.1:
Following the syntax of declaring a variable in C++/Pyhton, declare your own variables with the following data (2 pts each):
Evaluation Criteria: Assignment Rubric. Highest Score is 20.

1. id number of a student
2. quantity of an item
3. price of an item
4. gender of a student
5. salary of an employee
6. value of a Pi
7. final grade of a student in five subjects
8. tuition fee of a student
9. electric bill amount
10. middle initial of a student

Answer:

1. int IDNum;
2. int qty;
3. float item_price;
4. char gender[14];
5. double salary;
6. const double pi = 3.141592653589793238;
7. float average;
8. double tuition;
9. double bill;
10. char MI;

Assignment/Activity

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Learning Task 1.2.2:

Evaluate the following expressions as to true or false based on the used operators. Suppose a= 6, b=7, c=3. (2 pts each):

Evaluation Criteria: Assignment Rubric. Highest Score is 20.

1. (a <=b)
2. ! (a*b <= b*c)
3. ((b=2) <= c)
4. ! (a*b != b*a)
5. ! (c==3)
6. (a<=b) || (b>=c)
7. (b!=c) && (c<=a)
8. (b> c) && (c>a)
9. ! ((a>=c) || (b>=a))
10. !(a<=b) || ! (b>=c)

Answer:

1. True
2. True
3. True
4. True
5. False
6. True
7. True
8. False
9. False
10. False

Assignment/Activity

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Learning Task 1.3.1:
Create an algorithm both pseudo code and flow chart for the following problem:

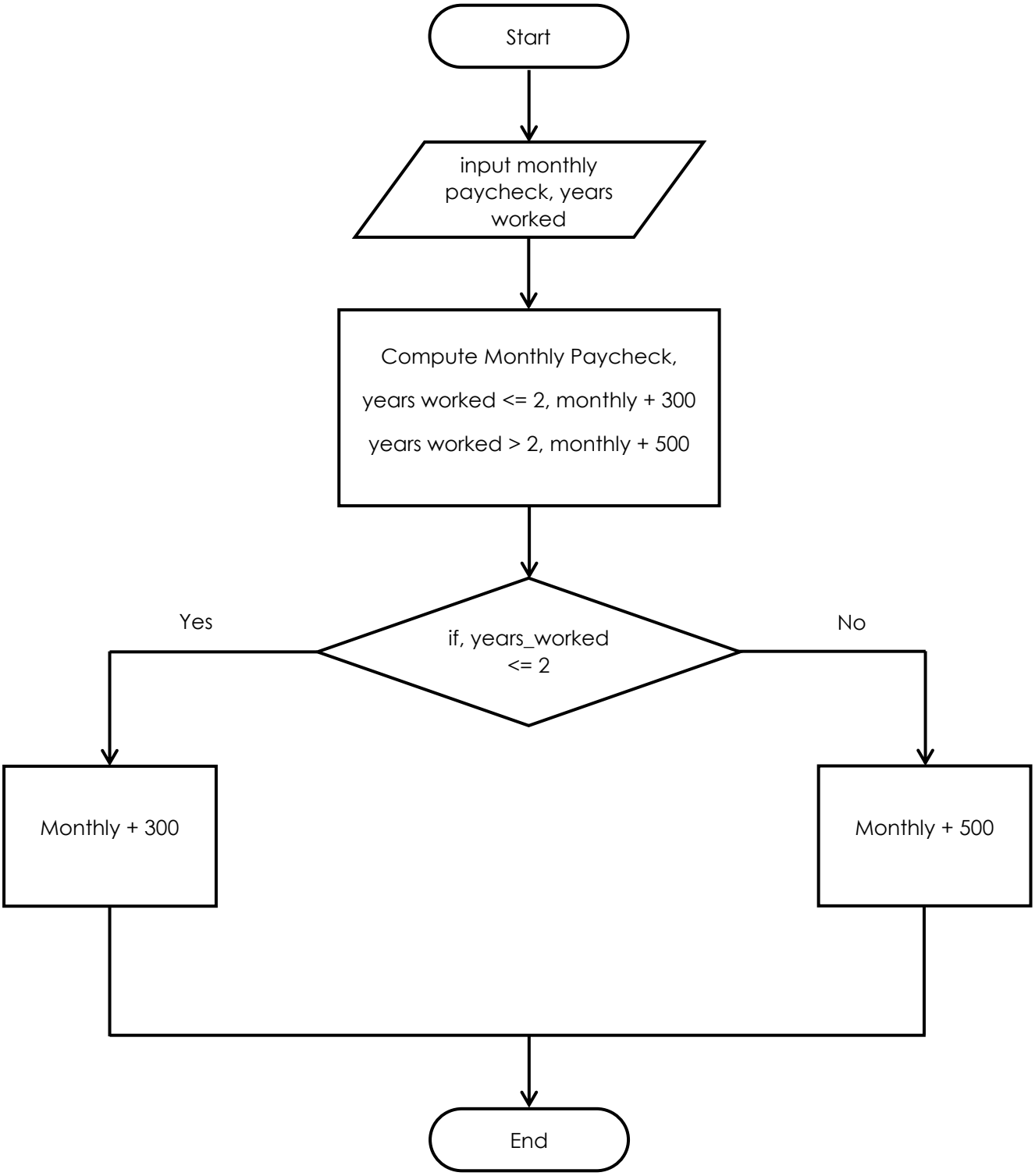
Compute for the monthly paycheck of a salesperson at a department store. The employee would receive a bonus of Php 300.00 for each year if he/she has been with the store for two years or less. If the employee has been with the store for more than two years, the bonus is Php 500 for each year.

Answer:

Pseudo Code

Begin
Clear the screen
Display "input monthly paycheck and years worked"
Accept input
Compute Monthly Paycheck
    if, years_worked <= 2, Bonus = 300, Monthly + 300
    if, years_worked > 2, Bonus = 500, Monthly + 500
Display Monthly Paycheck
End

Flow Chart


Start
input monthly paycheck, years worked
Compute Monthly Paycheck,
years worked <= 2, monthly + 300
years worked > 2, monthly + 500
if, years_worked <= 2
Yes
No
Monthly + 300
Monthly + 500
End

Assignment/Activity

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Learning Task 1.3.1:
Create an algorithm both pseudo code and flow chart that will compute how many 25 centavos are there in a five peso coin.

Answer:

Pseudo Code

Begin

Clear the screen

Initialize 5peso, 25cents, quot

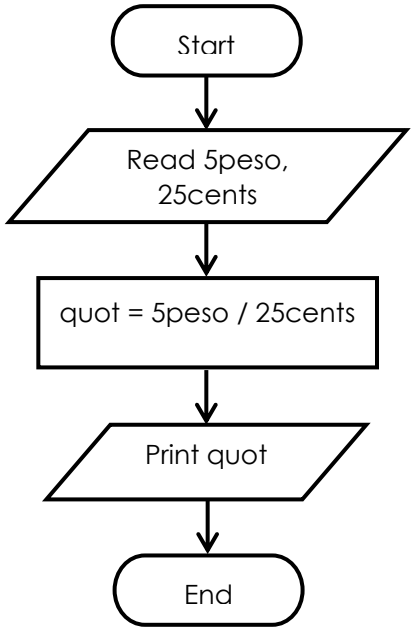
Read 5peso, 25cents

Compute quot as quot = 5peso / 25cents

Write quot

End

Flow Chart



Activity 1.4.1

```
#include <iostream>
using namespace std;

int main(){
    float salary, yearsOfService, bonus, paycheck;
    cout << "Enter employee's daily salary: ";
    cin >> salary;
    cout << "Enter employee's years of service: ";
    cin >> yearsOfService;
    if (yearsOfService <=2){
        bonus = 300 * yearsOfService;
    }else {
        bonus = 500 * yearsOfService;
    }
    paycheck = salary + bonus;
    cout << "\nEmployee's Montly Paycheck: " << paycheck;
    return 0;
}
```

Activity 1.4.2

```
#include <iostream>
using namespace std;

int main(){
```

```
    string name;
    int age;


   cout << "Enter your name: ";
   cin >> name;
   cout << "Enter your age: ";
   cin >> age;
   if (age % 2 == 0){
      cout << "\nName: " << name << "\nAge: " << age << "\nYour age is an
even number.";
   }else {
      cout << "\nName: " << name << "\nAge: " << age << "\nYour age is an odd
number.";
   }
   return 0;
}
```

Activity 1.4.3

```
#include <iostream>
using namespace std;
int main(){
   int a, b, c;
   cout << "Enter two numbers: ";
   cin >> a >> b;
   cout << "\nGiven Values:" << a << ", " << b;
   c = a;
   a = b;
```

```
    b = c;
    cout << "\nSwapped Values:" << a << ", " << b;
    return 0;
}
```

Activity 1.4.4

```
#include <iostream>
using namespace std;

int main(){

    int start, end, i;
    int o_sum = 0;
    int e_sum = 0;

    cout << "Enter a start: ";
    cin >> start;

    cout << "Enter an end: ";
    cin >> end;
    cout << endl;

    if (start>end)
    {
        cout << "ERROR! Starting Number is GREATER THAN the Ending Number!!!";
```

```
}
else if (start<end)
{
cout << "ODD NUMBERS" << endl;
i = start;
while(i <= end)
{
   if(i % 2 !=0)
       o_sum += i;
       if(i % 2 !=0)
       cout << i << " ";
       i++;
}
cout << "Sum: "<< o_sum;
cout << endl;

cout << "EVEN NUMBERS" << endl;
i = start;
while(i <= end)
{
   if(i % 2 ==0)
       e_sum += i;
       if(i % 2 ==0)
       cout << i << " ";
       i++;
}
cout << "Sum: "<< e_sum;
```

```
    }
    return 0;
}
```

Activity 1.4.5

```
#include <iostream>
using namespace std;

int main()
{
        int n, i;
        int sum = 0;

        cout << "Enter a number: ";
        cin >> n;

        if(n>0)
        {
            i=1;
                while (i <= n)
                {
                    sum += i;
                    ++i;
                }
                cout << "The SUM is: " << sum;
```

```
        }
        else
        {
            cout << "ERROR! Please input a positive number!!!";
        }
return 0;
}
```