Algorithms and programming project example

Algorithm

Steps

1   Select one of three serving options (plain cone, waffle cone, cup).
2   Choose number of scoops.
3   Calculate price based on serving option and number of scoops.
4   For each scoop, choose one of eight flavours.
5   Send order to staff.

Structured English

START
Get serving option
        Option values: plain cone = 1, waffle cone = 2, cup = 3
Get number of scoops
Calculate price
        Multiply option value by 50 cents
        Multiply number of scoops by $1.00
        Add figures
Display total price to customer
IF customer confirms purchase
        THEN
        WHILE flavour is unassigned to all scoops
                THEN get flavour of scoop
                THEN return to WHILE
        END WHILE
        Send order to staff
        Process order and take payment
        ELSE return to START
        ENDIF
END

Flowchart

```
                          Start

                    Choose serving option

       Plain              Waffle              Cup
       cone                cone             (Value =
                                                 )

                    Enter number of scoops

                      Calculate price
                  (Value x .50c) + (Scoops
                           *    )

                       Display price

                                    Customer
                  NO                 confirms
                                    purchase?

                                      YES

        YES                Are                         Choose
                         flavours            NO        flavour
                       assigned to                    for scoop

        Send order to staff

        Process order and take
              payment

             End
```